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DETROIT

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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S. P. A. OFFERS STUDEBAKER TRUCKS

Canadian Political Upset Seen as Blow to U. S. Car Sales Through New Tariff

Reprisal Against New Hawley-Smoot Measure Said to Be Certain; Canada Is Best Export Market for United States Cars

WASHINGTON, July 31.—Officials of the State and Commerce departments today were growing apprehensive as to the effect of the Canadian election upon the American tariff.

That retaliatory tariff action is to be taken by the newly elected Conservative administration against the United States is commonly conceded on both sides.

If Canada now proceeds under the new government to erect higher tariff barriers against American automotive products, it will strike a serious blow at United States manufacturers, and even those maintaining their own subsidiary factories in the Dominion, it was pointed out by tariff experts here.

In addition to the sale of cars in Canada, that country has always been a leading foreign market for American cars.

During the first five months of this year 12,714 passenger cars, valued at $10,096,784, and 2,525 trucks and buses, worth $3,606,599, were exported to Canada.

For the whole of last year exports to Canada aggregated 42,048 passenger cars, with a value of $33,353,924, and 5,694 trucks and buses, valued at $7,958,223.

The new American tariff was the principal issue in the Canadian election, the victorious Conservatives pledging the equivalent of

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SPACE ALLOTTED FOR BIG M. E. A. EXHIBITION

Chicago, July 31.—Contracts for exhibition space in the Motor and Equipment Association's fourteenth annual international trade exhibition, to be held in Cleveland November 10 to 14, inclusive, have been issued to all manufacturer members of the association, according to M. C. DeWitt, chairman of the show committee.

Economies made possible through the move to Cleveland and through efficient methods of handling details have made possible a reduction of 25 per cent. in the cost of each square foot of exhibition space to members. In addition the association is extending attendance privileges to a large number of automotive distributors on an invitational basis so that manufacture this year will be able to demonstrate and display their products to a greater number of trade representatives at a lower cost.

"We expect at least 300 exhibitors

(Continued on Page 2)

CHEVROLET OFFERS WIRE DISK WHEELS WITHOUT EXTRA COST

Detroit, July 31.—Further individuality in the selection of a car in the low priced field was made possible today with the announcement that wire or disk wheels are now optional equipment, without extra cost, on new Chevrolet Six passenger cars.

Formerly disc wheels were standard equipment except for sport models, on which wire wheels were mounted at the factory. Since the latter part of July, all passenger models are being shipped with wire wheels, while disk wheels also are being built to accommodate those purchasers who prefer this type.

The new wheel equipment is finished in a wide variety of colors to harmonize with the body trim of the nine different body models. The extensive color combinations used on the bodies, plus the added color harmonies available on the new wheels, will mean that the purchaser of a car in the low-priced field will be able to obtain greater individuality in his car than was possible heretofore.

The option of wire or disk wheels went into effect on August 1. Dealers with cars having only disk wheels at that time were supplied with sets of new wire heels to make the changeover for those purchasers desiring it.

TODAY

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LINE PRICED $695 TO $775 INCLUDES 1½ AND 2 TON MODELS ON 2 WHEELBASES

Seventy H. P. Six-Cylinder Engines, Four-Speed Gear Sets, High Fuel Efficiency Are Leading Features

South Bend, Ind., July 31.—The S. P. A. Truck Corporation, organized to engineer, manufacture and merchandise a complete line of Studebaker and Pierce-Arrow trucks, delivery cars, buses, ambulances, funeral cars and other commercial vehicles, announces a new line of Studebaker trucks. Presentation of a Pierce-Arrow heavy duty line will be made at a later date.

The first units announced are the new Studebaker 1½ and 2-ton trucks which, as a result of a seventy horsepower motor and low chassis prices, offer more power per dollar than any other trucks on the market, according to the manufacturer.

The new Studebaker 1½-ton truck is offered in two wheelbases:

130-inch wheelbase for $695 at the factory; 160-inch wheelbase for $775 at the factory.

Features of the 1½-ton chassis include a seventy horsepower, six-cylinder truck motor of 205 cubic inch displacement. High fuel efficiency is obtained through a gas pump, 1¼ inch plain tube carburetor and the "swan" type intake manifold. The crankshaft, statically and dynamically balanced, is carried on four main bearings having a total length of nine inches. Cam and accessory shafts are driven by a silent chain. A deep tubular radiator of 2⅜-gal-

(Continued on Page 3)

TOLEDO AUTOMOTIVE PLANTS ADD WORKERS

Toledo, July 31.—The Electric Auto-Lite Company will add 1,000 workers to the 3,200 employed at the present time in its Toledo plant on August 4, according to Frank H. Landwehr, secretary.

The City Auto Stamping Company, which is affiliated with the City Machine and Tool Company, will reopen with 400 workers, while the Dura Company, manufacturer of automobile hardware for many large manufacturers, will reopen with 1,100 workers on the pay roll.

Willys-Overland Company started to increase production gradually July 28, and now has 6,800 employees in the Toledo plant. Sales are increasing.

Ford to Reopen August 4; Better Feeling Apparent

DETROIT, July 31.—All plants of the Ford Motor Company in the Detroit area, including the plant of Lincoln Motor Company, are scheduled to reopen August 4. Workers were notified to this effect through advertisements in the local press.

Reports of a possible change in this plan are discredited locally, although leading officials of company are out of town. It is pointed out that the company announced on July 14, date of closing, that assembly lines would continue to operate two days to supply local dealers with cars, indicating stock of cars at that time was sufficient for the shutdown period.

Hammond, Ind., July 31.—Industrial feeling in the Calumet region was more optimistic this week than for some time past with reopening of the Ford assembly plant at Hegeswich announced, and two new plants ready to begin operations early in August. The Ford plant, it was said, will continue to operate at full capacity, with 2,400 workmen restored to the pay roll after a brief shutdown. Several hundred other persons are expected to find employment next month, when the Calumet Electric Castings Company plant here is opened and beginning operations of the first unit of the Lever Brothers soap factory, in Robertsdale, will employ 400 men, with other units to follow.

Chicago Trade Leaders See Prospects Improved

CHICAGO, July 31.—Leaders in the automotive field here are viewing prospects for the remainder of this year with confidence. A better sentiment is observed among car dealers as well as manufacturers of automotive products. Two prominent figures in the latter group came out today with cheerful statements in which they declare that optimism at this time is well justified.

"Business is definitely on the mend," said L. H. La Chance, chairman of the Stewart-Warner Corporation. "We look for the third quarter to show improvement over the second, and for the fourth period to gain over the third. We make a serious mistake when we compare current business with the abnormally prosperous 1929."

Sharing Mr. La Chance's views, W. J. Buettner, treasurer of the Bendix Aviation Corporation, declared:—

"Inventories are low and the stock of used cars is pretty well cleared away. These are two important points upon which I base my optimism."

Mr. Buettner expects that the motor industry during the current year will be at about the level of 1928, although below 1929. From present indications, he added, business will in the final six months of 1930 exceed the same period last year.

Revived interest in motor cars is

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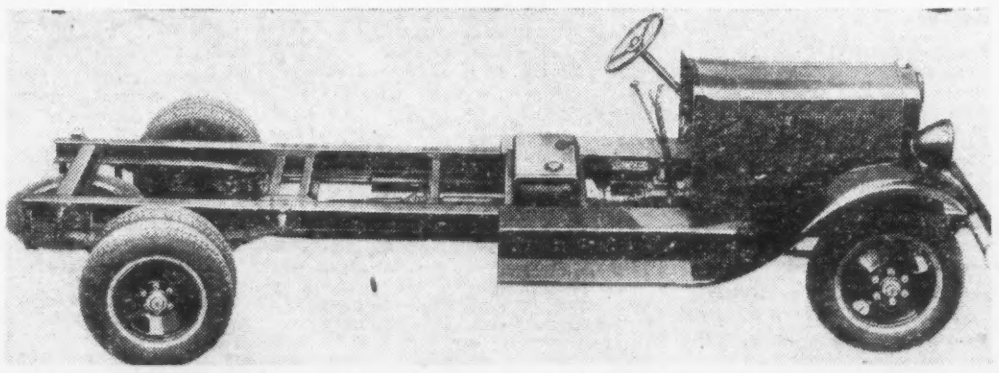
New Studebaker Truck by S. P. A.



THE NEW two-ton Studebaker truck is available with a choice of two wheelbase lengths: 148 inch for $895 at the factory, or 160 inches for $945 at the factory. The power plant is a seventy-horse power, six-cylinder engine. Dual rear wheels are standard. Timken front and rear axles, truck balloon tires and four-speed transmission are among its features. This chassis is available with all standard truck bodies

Higher Canadian Tariff On Cars Now Foreseen

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high retaliatory duties on the principal American products.

For years Canada has been America's best customer. Almost every year since the war $800,000,000 worth of American products have been shipped across the border, while about half as much, or $400,000,000 has come from Canada to the United States.

The trade balance in American favor is roughly $400,000,000 a year, and that has represented no inconsiderable factor in American prosperity.

Besides American automobiles and trucks, Canada imports from the United States machinery, gasoline and oil, tires, steel products and cotton. In return, the United States has taken cattle, dairy products, wheat, lumber, wood pulp and news print.

Having a preferential agreement with Canada, Great Britain has launched a campaign for trading almost within the empire, which means that almost everything that America ships to Canada in great volume must meet British products in competition.

In the meantime, pending the organization of the Conservative government across the border, American tariff experts must mark time until the new Canadian duties are put into effect.

Having filed with the State Department a protest against the new Spanish duties on American cars on the grounds of discrimination, it was expected here today that the National Automobile Chamber of Commerce eventually will take similar action against the Canadian government.

IMPROVEMENT SEEN FOR THIRD QUARTER

(Continued from Page 1)

reported among dealers and distributors here. The Chicago Association of Commerce has taken cognizance of the introduction of new eight-cylinder models in turn by Studebaker, Chrysler and Buick, trade experts of the association reporting that the advent of these new lines has already stimulated the retail automobile demand.

Advance news that these three prominent manufacturers in the moderate priced field would come out with new models gained widespread circulation here. The result was a policy of waiting by motorists to see and inspect the latest models of these makers before placing orders. This situation, more than any other single factor, accounted for the comparative lull in buying in many cases during June and early July.

In each instance the introduction of the new models was accomplished in rather spectacular fashion. The trade in general agrees that the effect was to make the public more automobile-buying minded. Now that the cars are on display and their features may be studied, the element of suspense has been lifted. Dealers and distributors of other makes declare they are sharing the demand with Studebaker, Chrysler and Buick. Renewed energy in the form of sales effort and advertising has been apparent, and more of it is in prospect.

With inventories in the healthiest state in history, both as regards new and used cars, it is certain that the drive for sales from now on will go forward with more intensity and enthusiasm. The feeling prevails also that business will become constantly better, and that buyers who have withheld purchases of new cars will place orders in increasing numbers.

Prospects are being told that the automobile dollar buys more than at any previous time in terms of style, performance and safety. This argument, coupled with pointing out merits of the particular car represented, and stressing the needlessness of waiting, is bringing results for salesmen.

GETS DE SOTO DEALERSHIP

Hartford, Conn., July 31.—The Michaels Garage, West Hartford, has taken on the De Soto as an associate dealer of Aaron G. Cohen, Inc., distributor in this territory.

Classified Advertising

Classified Rates 5c Per Word

HUDSON-ESSEX PREFERRED

If you have an opening in your organization for a retail or wholesale manager, my services are available in that I have recently sold my interest in a dealership which has made a net profit for this year. My references, experience and integrity will stand up after your investigation. Address Box 50, Detroit.

REPLACEMENT DEMAND IN 1929 ACCOUNTED FOR 49.8% OF ALL CAR SALES

Washington, July 31.—A total of 1,825,348 more cars were bought than were junked last year.

New pasenger cars and trucks sold during 1929 totaled 4,625,348, while the number junked aggregated 2,800,000, according to revised figures made public today by the American Motorists' Association.

An analysis of the figures shows that 49.8 per cent. of all new cars sold last year were bought as replacements for used vehicles.

TRIPLEX AND PITTSBURGH PLATE GLASS MAY MERGE

Passaic, N. J., July 31.—It is reported here that preliminary plans are being worked out for the merging of the Triplex Safety Glass Company of America, with plants located in this city and Clifton, N. J., nd the Pittsburgh Plate Glass Company, following the court victory of Triplex restraining other concerns from manufacturing its product.

LUVESAY RESIGNS; MAYO CO. TEMPORARILY CLOSED DOWN

Portsmouth, O., July 31.—E. G. Luvesay, general manager of the Mayo Company, manufacturer of gears, gear pullers, hydraulic jacks and other machine tools, has resigned and the plant has been temporarily closed down. He came to Portsmouth from Dayton about two years ago and was one of the organizers of the Mayo Company, having taken over the old Heer engine plant here.

MOTOR FIRE APPARATUS SALES INCREASE IN JUNE

Washington, July 31.—Manufacturers of motor fire apparatus during June shipped 103 pieces, as compared with 95 during May and 120 in June of last year, the Department of Commerce announced today. These totals were based on reports from the twenty-two manufacturers which make motor fire apparatus.

PECK CHEVROLET APPOINTS RICHARDS SERVICE MANAGER

Bridgeport, Conn., July 31.—William G. Richards, formerly of the Chevrolet factory, has been appointed service manager of the Peck Chevrolet Company, 601 State St. He was an instructor at the factory service school and also served as assistant zone service manager for Oldsmobile.

HENLEY-KIMBALL COMPANY MANAGERSHIP TO BERNARD

Boston, Mass., July 31.—A. A. Bernard has been appointed assistant manager of the Henley-Kimball Company, distributor of Hudson and Essex cars here. He was associated with this company for a number of years prior to 1927 and has just returned from California where he has spent the greater part of his time since leaving Boston.

BRANDT ON PACIFIC COAST VISITING AUSTIN'S DEALERS

Los Angeles, July 31.—A. J. Brandt, president of the American Austin Company, is now on the Pacific Coast visiting various distributors and dealers for the American Austin automobile.

HEISKELL COMPLETES 25 YEARS AS OFFICIAL OF MARMON COMPANY

Indianapolis, Ind., July 31.—Twenty-five years of service as a Marmon official have been completed by A. R. Heiskell, vice-president and secretary of the Marmon Motor Car Company.

Mr. Heiskell joined the Marmon organization in 1905 as purchasing agent after long association with the International Harvester Company. His service with the latter organization began in his boyhood when he was employed as an office boy during summer vacations, and continued afterwards for a considerable period during which he earned rapid advancement.

He was elected treasurer and director of the Marmon company in 1915, and six years later became vice-president. The duties of secretary also were assumed by Mr. Heiskell in 1923. At the present time he is supervisor of the three Marmon branches in New York, Detroit and Indianapolis.

With the exception of the members of the Marmon family, Walter and Howard, who are chairman of the board of directors and vice-president in charge of engineering, respectively, Mr. Heiskell is the oldest Marmon executive in point of service. Throughout his quarter of a century with Marmon, he has been intimately engaged in every phase of the company's activity.

"For twenty-five years I have watched the progress of Marmon," Mr. Heiskell said on his anniversary. "The last five years have marked the greatest progress in Marmon history, and I am sure that the next five will reveal still greater accomplishments."

SPACE ALLOTTED FOR BIG M. E. A. EXHIBITION

(Continued from Page 1)

at the exposition and a trade attendance of more than 7,500 during the five days in which we run," Mr. DeWitt said. "We will use the Public Auditorium arena, the west wing, and the arcade connecting these two exclusively for exhibition purposes."

The M. E. A. Trade Exposition has long been the high spot of the year for manufacturers and distributors of automotive parts, accessories, shop equipment, small tools and supplies. Advance showings of new products developed during the year, personal discussion of distribution problems and crystallization of business sentiment always have been important annual features.

UTICA BUS COMPANY SEEKS TO ACQUIRE ANOTHER LINE

Old Forge, N. Y., July 31.—The Utica-Old Forge Transportation Company, Inc., has petitioned the Public Service Commission for permission to take over all of the stock of the Blue Mountain-Fulton Chain Bus Lines, Inc., of which Maurice Callahan is owner. The company also seeks approval of the transfer of a certificate granted the Blue Mountain Bus Line to operate a bus line between Thendara, Old Forge, Inlet, Racquette Lake and Blue Mountain Lake.

SPARKS from DETROIT

* * *

L. P. Fisher Surprises.

* * *

Straight Twelves Rumored.

* * *

Conference Season.

* * *

THAT we are to have a twelve-cylinder V-type automobile is an assured fact. Lawrence P. Fisher, president of Cadillac, made this announcement the other day and it took "those in the know" in Detroit by surprise. It was known in certain quarters that this new motor car would be announced, but from information gleaned from sources close to Cadillac it was supposed this automobile would be announced at the time of the forthcoming New York Automobile Show next January.

Tests of this new twelve-cylinder motor car have been going forward at the General Motors proving ground and at the Cadillac laboratories for many months, and it has been perfected.

It will not be a small automobile, by any means, as wheelbases will average 140 to 143 inches and it will be a companion car to the now well known Cadillac V-Sixteen, which has scored such a success since its announcement last January.

Nothing is known as to whether any further changes are coming in the Cadillac or La Salle line.

* * *

ANNOUNCEMENT of the twelve-cylinder Cadillac has started rumors of other multicylinder automobiles. Considerable talk is heard in Detroit regarding a straight twelve, but when queries were made at various factories there was nothing but denials regarding such a motor car.

It is known that a straight twelve was built by one company as an experimental car, but nothing has been done to bring such an automobile into production up to the present time.

* * *

Senator Arthur H. Capper dropped into town the other day and had luncheon with several well known automobile men. He is on his vacation, but will make a number of addresses at various points in the country.

* * *

AUTOMOBILE men of Detroit are firmly convinced that golf is copying several rules from baseball. At a well known public golf course near the city a sign has been erected which says: "No rain checks after the fifth hole." Attendants at the course said that every time it rained, no matter whether a golfer had played sixteen or seventeen of the eighteen holes, he wanted a rain check. Some one remembered that no rain checks are issued at a baseball game after the fifth inning, so the golf course borrowed the idea.

* * *

CONFERENCES seem to be the thing at many of the automobile manufacturing plants in Detroit. Many dealers and field men are coming to the city from time to time and there are interchanges of ideas between the manufacturing executives of the plants and the dealers and field men.

* * *

L. G. PEED, along with other executives of the De Soto Motor Corporation, is celebrating the second birthday anniversary of the De Soto motor car, which made its bow to the public August 4, 1928.

Mr. Peed said the other day that the De Soto is continuing its gains this year and that registration statistics show that it has passed four more automobiles of established reputation.

ADAMS IGNITION SERVICE LEAVES ILION FOR UTICA

Utica, N. Y., July 31.—The Adams and Donohue Electric Company, formerly of Ilion, N. Y., will open at 418 Layafette St. here on August 1. This firm, which specializes in motor and armature rewinding, ignition, starting and lighting of all makes of motor cars, was known in Ilion as the Adams Electric & Machine Company. Jack Adams, electrical and mechanical engineer, is president and general manager of the firm, and H. C. Donohue is vice-presidnt.

STEVENS & VETTER ERECT $15,000 HOME IN TACOMA

Tacoma, Wash., July 31.—Stevens & Vetter Inc., automotive parts and repair firm, has completed a new building at 503 Puyallup Ave. It is a one-story concrete structure, 75 by 130, and has a full basement. It cost approximately $15,000. The basement and a part of the main floor are being used by the owners. A portion of the building has been leased to the Fageol Motor Sales Company for its Tacoma headquarters.

REORGANIZES SERVICE

Stamford, Conn., July 31.—Connecticut Auto Sales Corporation, Main and Pleasant Streets, Chrysler dealership, has installed a complete stock room for repracement parts and reorganized the service department, which now employs eight men. The concern took on Chrysler only recently, having formerly carried Auburn.

FRIND DIES SUDDENLY

Lyons, N. Y., July 31.—George Frind, 65, Lyons business man and owner of a large retail and wholesale gasoline business in Water Street, died suddenly Monday at the farm of William Storms in East Lyons where he had gone to transact business. Mr. Frind was past exalted ruler of the Elks.

ANNIVERSARY MARKED

Mooresville, N. C., July 31.—The J. B. Smith Motor Company, dealer for Oakland and Pontiac cars and Willard batteries, celebrated its seventeenth anniversary here last week. J. B. Smith is president of the concern.

S. P. A. Presents New Line Of Studebaker Trucks in 2 Wheelbases for $695-$775

(Continued from Page 1)

lon capacity provides ample cooling. The water circulation is 45 gallons per minute at a truck speed of forty miles per hour. An oil filter is standard. Engine is mounted on four brackets, the front end cushioned in rubber.

A heavy duty, four-speed transmission, with selective sliding gears, provides four speeds forward, and reverse. Shafts and gears are of special alloy steel, carried in heavy bearings.

Front axle is of conventional truck design, with large size spindles cushioned in Timken bearings. A Timken three-fourth floating rear axle, designed for heavy service, has an extra heavy pinion gear in straddle mounting and stout shafts of special alloy steel. A back-up plate keeps the ring gear in full mesh, even under severe strains.

The steering gear is the Ross cam and lever type, preferred by operators for ease of steering in tough going, and for its exceptional strength. Four wheel brakes of the improved Bendix two-shoe type, cable controlled, with molded linings for increased efficiency and long wear, are standard.

The sturdy truck frame has been engineered and built for maximum strength. On the 130-inch chassis there are five strong cross members. On the 160-inch chassis, seven strong cross members.

Special attention has been paid to spring equipment. Springs are manufactured in Studebaker plants from steels made to Studebaker formula. Rear springs are carried on outrigger hangers of heavy duty design, securely riveted to the frame. Auxiliary rear springs are available at extra cost on both lengths of the 1½-ton chassis.

Single steel wheels are standard equipment of the 1½-ton chassis, with dual rear wheels available at extra cost.

The Studebaker two-ton truck is offered with two wheelbases, 148-inch and 160-inch. Price on the 148-inch wheelbase chassis is $895 at the factory; on the 160-inch wheelbase chassis, $945 at the factory. The two-ton chassis is powered with a six-cylinder Studebaker-built motor of 70 horsepower. Transmission is of heavy duty, four-speed type with four speeds forward, and reverse. A sturdy double-plate clutch, four-wheel brakes of the latest two-shoe Bendix truck design, gasoline pump and oil filter are standard.

The rear axle is a Timken full floating type, especially designed for this particular chassis. Steering gear is the approved Ross cam and lever type. The rugged chassis frame has six sturdy cross members on the 148-inch wheelbase and seven cross members on the 160-inch wheelbase. Steel wheels, with dual rear wheels, are standard equipment. Auxiliary rear springs are optional at extra cost.

Both the Studekaber 1½ and 2-ton chassis are furnished with steel cowl hood and front fenders. The front bumpers are chromium plated single bars, 5 inches wide. In addition to the instrument panel, which carries speedometer, ammeter, gas gauge, oil pressure gauge and engine temperature indicator, the combination ignition switch and light control are mounted on the dash. Another Studebaker truck feature of importance is the auxiliary foot button light control, permitting the driver to change headlights from long to short range without removing his hands from the steering wheel.

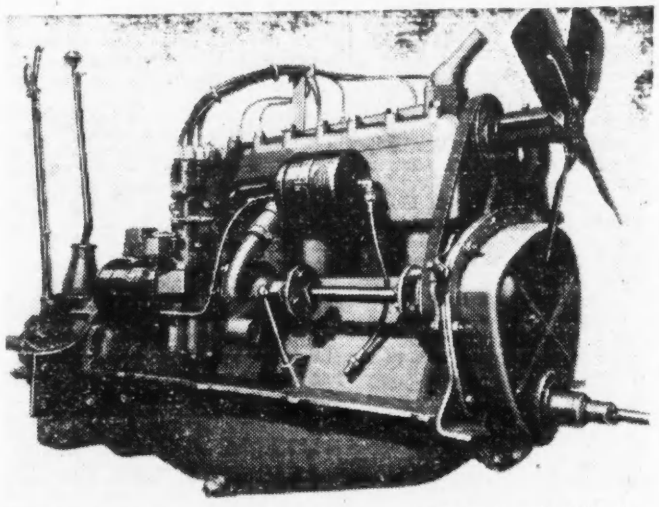
Studebaker offers a de luxe all-weather cab on both chassis. Special attention has been given to the driver's comfort and convenience. The doors are 28½ inches wide, with 23-inch windows which drop flush from the sills. The rear window is 25¾ inches wide. Narrow steel pillars give full vision for the driver. The seats are comfortably upholstered, and there is more than the usual amount of leg room.

All standard bodies are available with both the Studebaker 1½ and 2-ton chassis, including panel, screen, express, stake, canopy, grain, cattle and dump bodies.

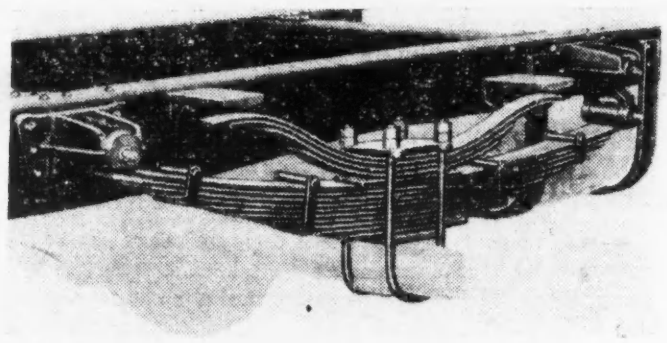
In addition to the 1½ and 2-ton chassis just announced, the commercial car line of the S. P. A. Truck Corporation includes delivery cars, funeral cars, ambulances, buses, and chassis for such special purposes as fire and police equipment. Larger truck units to be manufactured under the Pierce-Arrow name will be announced later.

The S. P. A. Truck Corporation engineering staff is headed by F. L. Sage, chief engineer, who formerly acted in a similar capacity for the truck division of Dodge Motors. J. A. Packard, Studebaker truck engineer, was formerly engineering secretary and laboratory engineer with the White Motor Company. B. Frank Jones will continue to serve as Pierce-Arrow truck engineer, a position he has filled for the past eleven years. H. V. Loveland, who has been in charge of body engineering for Studebaker commercial cars since 1925, will continue in the same capacity. E. H. Lundell, whose experience with heavy duty marine, Diesel and truck motors extends back over fifteen years, is designing engineer. These men have at their disposal Studebaker's extensive proving ground and laboratory facilities to aid them in the development of a rugged line of commercial units.

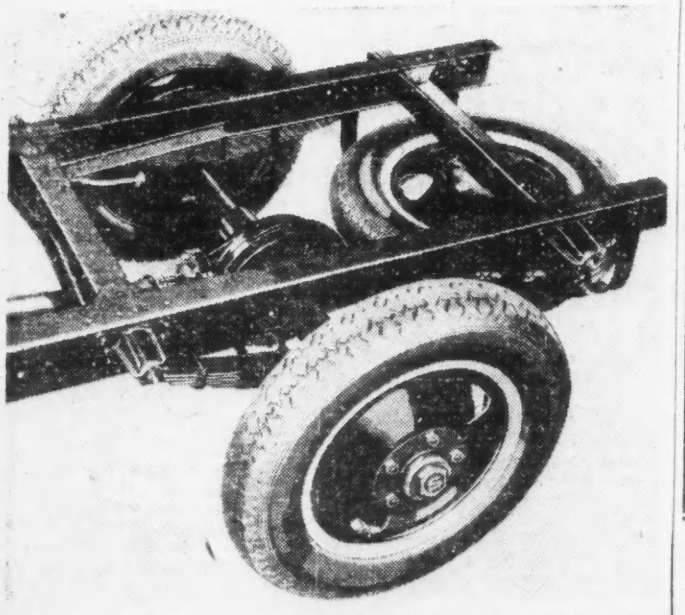
Albert Russel Erskine is president of the S. P. A. Truck Corporation. Other officers include J. M. Cleary, vice-president and general manager; A. G. Rumpf, treasurer; J. F. Cotter, secretary; H. E. Dalton, comptroller; C. H. Wondries, vice-president in charge of sales, and Hal T. Boulden and Paul H. Castner, sales managers.



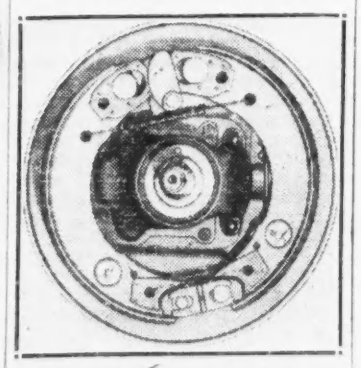
THE 1½ AND 2-TON Studebaker trucks are both powered with six-cylinder motors of 205 cubic inch displacement, developing full 70 horsepower



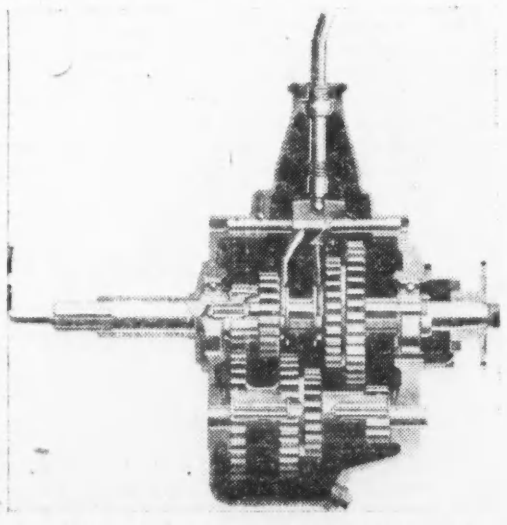
REAR SPRINGS on the new Studebaker 1½-ton chassis are 2½ inches wide and have ten leaves, to give ample capacity for normal loads. An auxiliary type spring is available at extra cost to increase riding quality. Spring hangers are out-rigger type



THE REAR ASSEMBLY of the Studebaker 1½-ton truck. Note position of tire carrier under rear of frame



FOUR-WHEEL brakes of the improved Bendix 2-shoe type, cable controlled with molded linings for maximum breaking efficiency and long life, are standard on the new Studebaker trucks



THE HEAVY DUTY 4-speed transmission, selective sliding gears, 4 speeds forward, and reverse, used in the new Studebaker trucks

Chevrolet Gains on Ford As Seattle Sales Hold Up

SEATTLE, Wash., July 31.—While both Ford and Chevrolet sales here continue at a healthy rate, during the week ending last Friday night, Chevrolet gained somewhat on the ratio of sales. The total for the week (July 19 to July 25 inclusive) was 125 Ford new car registrations and thirty-nine Chevrolets. The new Chevrolets are being well received.

During the week four Austins found their way to the registration books, this making the total Austin sales, to date, in the Seattle district (King county) five. This little car is, however, attracting much attention.

C. H. Wells, Inc., automobile row Chevrolet dealer, is stressing the six-cylinder job and in advertising is setting forth six reasons for buying his car—smooth, comfortable, easy driving, economy, beauty and easy to buy.

Used car stocks continue in low inventory here, and in fact throughout the city among all the chevrolet and Ford dealers. Nelson Chevrolet in Ballard suburb enjoyed a good week's business. Maintenance was an important item. The same is true of Kirksey Chevrolet, Inc., in West Seattle.

Wm. O. McKay, Inc., is hammering heavily on the McKa-Ized Ford cars (used) and sales have been good. New and used cars to a total of 102 was the record for this firm for last week, according to sales manager Gibbons. Model T used Fords are still in demand, with prices running from $27.50 to $145. There is good demand for Model A used Fords.

The McKay Company enjoyed its annual picnic last Sunday at a resort on Lake Sammamish, about 425 being in attendance. This was the sixth annual affair and a real event.

Other Ford dealers reported surprising demand for used cars since July 4, when there is usually a falling off. However, not this year.

Howard Quinn, manager of Motor List Company, dealing in automotive statistics and lists for Washington and various cities and counties therein, is back from a trip to Bellingham, Wash., and other sections. He reports business improving greatly. He found shops and service departments of dealers very busy, maintenance work being steadily gaining.

Tourists are coming to the Northwest, but not quite in as large numbers as had been expected. However, the tourist business is stimulating service station and general maintenance and supply business for the automotive trades.

July wound up as a very good month for Ford and Chevrolet as was earlier predicted by Automotive Daily News. In fact, other dealers also report the outlook as much better than a month ago.

Bus Field Activities

Camden, N. J., July 31.—The city commission and the South Jersey Transit Commission are cooperating in further preliminary plans for a $3,000,000 high-speed train-bus hookup in the city with Camden bridge. The program calls for a $500,000 to $1,000,000 union bus terminal and subway station fronting the new city hall and a 2,500,000 tube under Fifth Street from the span to the Broadway station of the Pennsylvania Railroad.

New London, Conn., July 31.—Connecticut Motor Transportation Company, operating a New London-Springfield bus line, has inaugurated a new schedule providing four trips a day each way. One trip is run on Sundays. The company, which has its offices at 15 State St. here, is known as "The Short Line."

Hornell, N. Y., July 31.—G. Lester Smith has been granted permission to establish and operate an interurban bus line between Hornell and Geneva, N. Y., a one-way distance of fifty-six miles. It is planned to operate two round trips daily, with a one-way fare of $2.65.

Newark, N. J., July 31.—Twenty-five new super service buses have been placed in operation on long distance lines of the Public Service Co-ordinated Transport on the Southern Division. Ten of the new buses are operating between Philadelphia and New York and the balance were assigned to the Philadelphia-Atlantic City, Philadelphia-Ocean City and Philadelphia-Wildwood-Cape May lines.

Los Angeles, July 31.—An offering of $1,200,000 of Pacific Greyhound Lines, Inc., equipment mortgage 6 per cent. serial gold notes is being made by a banking syndicate consisting of Anglo and London-Paris Company, California Securities Company and the Anglo-California Trust Company. The proceeds will be used for the purchase of additional equipment for the transportation lines controlled by the company and other corporate purposes.

Geneva, N. Y., July 31.—The lines and franchise of the Geneva City Bus Lines have been purchased from the Colonial Motor Coach Lines, Inc., by Ivor Lont of Auburn, N. Y. The new owner plans to continue operation of the lines, but will substitute lighter and smaller buses over the routes.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

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Exports Decline

FIGURES for the first half of 1930 indicate that the United States, in common with the rest of the world, has suffered a decrease in export business. The unhappy feature of the situation is that we have lost more heavily than any of the other leading nations in the export field.

During the six months just past our exports have declined about 20 per cent. under the total that we achieved in the first half of 1929. Great Britain during the same period saw its overseas business decline by 15 per cent. Italy had to swallow an 11 per cent. loss. France saw her exports decline by 5.4 per cent. and Germany was best off in this respect with a loss of 5 per cent.

Lumping the European losses in the export field, the average was only 5.5 per cent., while the declines registered by non-European countries averaged 19.4.

Analyzing conditions in the export markets of the world, there is no question that a general depression everywhere was the underlying cause of the decrease in export buying. We ourselves have been through a bad time and have curtailed our purchases of foreign products just as we have dropped our buying of home-produced goods. Our lessened buying power will probably account for much of the loss recorded in the export business of Great Britain, France and Germany. Unfavorable conditions abroad were responsible for other countries' hesitation from buying our offerings. And above the whole export picture hangs the heavy cloud of the Hawley-Smoot tariff enormity. We are not yet through paying for that particular piece of congressional stupidity.

June Sales

ENOUGH state returns are now in hand for us to make a fairly accurate estimate of the total vehicle sales for the month of June, 1930. This total will be in the neighborhood of 250,000 passenger car vehicle units.

It will be interesting to compare this with the June totals of recent years. June, 1929, an altogether supernormal year and month, of course, showed a total registration of 386,537 passenger cars. In 1928 the June total for passenger units was 317,191. June, 1927, showed a total of 263,868 cars, and 1926 set a mark of 313,834 units. It is quite possible that the figures for June of this year may equal the 263,868 that made the total for June, 1927.

It is a matter of record that the automotive industry runs in cycles of three years. It starts from the bottom of a valley, such as we are "enjoying" this year, and moves upward, a good year following the very bad one and rising to a climax of prosperity the third year.

Obviously conditions outside what we have come to accept as normal, such for instance as our likely loss of export business for some time to come or general business throughout the world, might halt or delay our rise to the third year of high powered prosperity, but short of this nothing can.

And right here The Automotive Daily News will go on record as predicting a good year in the automotive industry during 1931.

WHEN Buick recently announced its 1931 models, embodying straight eight engines and a number of other interesting features, the company had 7,000 orders for cars on its books before a single one of those customers had seen the new vehicles. If any one needed a lesson in the permanent value of a good name, of honest manufacturing, here is a specific instance.

Pittsburgh steel manufacturers are said to be waiting impatiently for the revival of automotive production to come to the rescue of their business. That's nothing. The automotive manufacturers are even more impatiently awaiting the revival of production to rescue them from starvation.

Ask Us to Tell You

In presenting this service department, The Automobile Daily News is actuated by the desire to help its readers solve their problems.

In some instances readers may desire information which will require an expenditure of money to secure, and in such cases we shall be glad to get the desired data at the least possible cost, or we shall inform our readers where they may obtain it most economically and expeditiously.

SMALL CARS

QUESTION: Are there any other small cars being made in the United States at this time other than the Austin?

J. B., Billings, Mont.

ANSWER: The Austin car at the present time is the smallest car being made in this country. Plans for the production of other small cars have been announced from time to time, but none of these plans have developed to the point of actual production and sale, to the best of our knowledge.

POINT SYNCHRONISM

QUESTION: We have a car in our shop which has given us considerable trouble. The engine will not run smoothly and I wondered if there perhaps was something wrong with the timing. This is a double contact job and I thought perhaps the contact points might not be properly adjusted. Would this cause the trouble.

R. V., Scranton, Pa.

ANSWER: Yes. The two breaker arms in a double contact job control half the cylinders each. If these points are out of synchronism as much as one degree it would tend to cause uneven power inmpulses and vibration. These points must be in absolute synchronism to insure smooth engine operation.

84,000 MILES OF ROAD BUILT THROUGH FEDERAL AID IN THIRTEEN YEARS

Washington, July 31.—Figures just issued by the Federal government, showing progress in Federal aid road construction to July 1 last, disclose that 84,000 miles have been completed since 1917, when the Federal aid program was inaugurated.

A total of 9,914 miles of highway is now under construction at an estimated cost of $272,012,000, of which the Federal government is contributing $11,630,191.

There is a balance of more than $75,000,000 still in the hands of the United States Treasury for expenditure on Federal aid projects for 1930.

The total mileage in the United States at the present time, including all types of roads, is 3,015,000 miles. If all of the registered cars and trucks were evenly distributed over the network of highways there would be 7.8 vehicles per mile.

MARMON SALES MANAGER TOURING IN SOUTHWEST

Indianapolis, Ind., July 31.—Sam V. Harding, sales manager of the Marmon Motor Car Company, has left the factory on a two-weeks' business trip into the Southwest. Wherever possible, jumps between distributor points on Mr. Harding's itinerary will be made by airplane, factory officials said, marking the first time high factory executives have used the airways for business since the company disposed of its own plane two years ago. Mr. Harding expects to call on practically every large dealer in the Southwest while in that territory.

SECOND AUSTIN DEALERSHIP IN ALABAMA OPENS DOORS

Birmingham, Ala., July 31 (UTPS).—The second dealer in Alabama for the new American Austin opened salesrooms here recently. The company is located at 407 South 21st St. Jim Davis and R. A. Porter are partners in the new firm, which has not yet been named.

Firestone Co. Celebrating 30th Anniversary

AKRON, O., July 31.—From an abandoned corner-lot-factory 100 by 75 feet to an organization with factories, plantations and other holdings covering more than a million acres is the history of the Firestone Tire and Rubber Company, which is at present celebrating its thirtieth anniversary.

Thirty years ago Harvey Firestone, Sr., surveyed his first factory. Most of the windows had been broken and weeds were growing luxuriantly all about, but the condition of Mr. Firestone's finances made the future rubber magnate care little about external appearances.

From that little shop has sprung an organization that reaches around the world. The original ten-man staff has grown to an organization of 15,000 stockholding employees, with factories in Akron, Los Angeles, Hamilton, Ontario, and London, England, which have a combined capacity of 80,000 tires a day. Annual sales of the parent company and its subsidiaries reach nearly $150,000,000 a year.

In addition to its tire factories, the company has the fabric mills at New Bedford, Fall River, Newburyport and Hudson, Mass.; a great rubber preparation plant in Singapore, distributors and branches in every part of the world and 26,000 dealers in the United States.

In Liberia, Firestone is busy developing 1,000,000 acres of land into a rubber plantation. New roads, bridges, schools, hospitals, churches and libraries have been built in Liberia and the country is in a second's touch with the United States and other parts of the world by a highly developed short wave radio system, the United States-Liberia Radio Corporation, under the direction of Firestone.

Harvey, Jr., is vice-president and a director of the Firestone Tire and Rubber Company. He is vice-president and general manager of the Firestone Plantations Company, which operates the vast Liberian project. Russell A. Firestone is vice-president of the California company and vice-president of the Firestone Park Trust and Savings Bank. Three other sons are planning to enter the business. Leonard and Raymond will step in when they finish their studies at Princeton. Roger, student at Asheville School, Asheville, N. C., is deeply interested in rubber chemistry and already has his laboratory set up in his room.

OAKLAND-PONTIAC SALES LEADERS FROM 5 STATES HOLD CHARLOTTE RALLY

Charlotte, N. C., July 31.—Dealers in the Oakland and Pontiac lines of motor cars in five states attended a conference here at which W. A. Blees, vice-president and general sales manager of the Oakland Motor Car Company of Lansing, Mich., discussed sales policies for the remaining months of this year.

Approximately 150 dealers and their sales managers attended this meeting. The dealers were from North Carolina, South Carolina, Virginia, West Virginia and Tennessee. W. T. Minor, zone manager, was host to Mr. Blees, who recently assumed his present position.

A vigorous sales campaign in this territory during the autumn and winter is being planned by the Oakland Company. Sales policies and plans of this company in recent weeks have undergone important changes under the direction of Mr. Blees.

ERECT LARGEST GARAGE IN EUROPE AT STOCKHOLM

Washington, D. C., July 31.—Philipsons Automobilaktiebolag, Stockholm, Sweden, has completed its new garage building, which is the largest in Europe, according to the automotive division of the United States Department of Commerce

The building has a total floor area of approximately 340,000 square feet, with space for 1,500 automobiles, workshops, offices and service station. In addition, the top floor houses an exhibition hall to be used for automobiles and other industrial arts exhibits.

LEACH & TYLER NEW FORD DEALERSHIP IN BALTIMORE

Baltimore, Md., July 31.—A new company has been formed here known as Leach & Tyler, Inc., located at 4006-10 Belvedere Ave., to handle the Ford dealership in the northern section of the city. V. O. Leach and Edward S. Tyler are partners. The new $50,000 building has reached completion. It is two stories in height with the salesroom and used car department on the first floor, and shop and stock department on the second.

DE SOTO APPOINTS BARTON DENVER DISTRICT MANAGER

Denver, Col., July 31.—J. R. Barton has been appointed manager of the Denver district by the De Soto Motor Corporation. Mr. Barton has been away from Denver for three years and has spent a good part of that time as metropolitan representative of De Soto Motor Corporation in Chicago. Before that he was engaged in the automobile business here.

THOMAS BUICK COMPANY NEW ASHEVILLE DEALER

Asheville, N. C., July 31.—The Thomas Buick Company formally opened its doors here this week when the new Buick eight made its debut in this section. Over 1,000 persons visited the showrooms on the opening day, according to E. O. Thomas, president.

The Thomas Buick Company is located on the former location of the Webb Motor Company on Coxe Street. L. F. Watts, who was connected with the Webb Motor Company, is secretary of the new concern. The Thomas Buick Company will be exclusive dealer for Buicks in Buncombe, Yancey and Madison counties.

BLESS OF OAKLAND PAYS VISIT TO CHARLOTTE, N. C.

Richmond, Va., July 31 (UTPS).—W. A. Bless, vice-president and general manager of the Oakland Motor Car Company, was a visitor to Charlotte, N. C., this week and made an address to dealers from North and South Carolina, West Virginia and Tennessee. Mr. Bless has just recently been promoted to his present position.. He was formerly president of the Motor Accounting Corporation, a division of General Motors. He came direct from Pontiac, Mich., to speak to the 150 dealers and their sales managers assembled at Charlotte to receive the new factory policies from him.

COMING EVENTS

AUGUST

26-28—**Chicago, Ill.** Society of Automotive Engineers aeronautic meeting in conjunction with National Air Races.

SEPTEMBER

22-26—**Chicago, Ill.** American Society for Steel Treating meeting at Stevens Hotel.

29-Oct. 4—**Pittsburgh, Pa.** National Safety Council Annual Safety Congress.

OCTOBER

2-12—**Paris, France.** Automobile Salon.
6-11—**Washington, D. C.** Sixth International Road Congress.
6-11—**Washington, D. C.** American Road-builders' Association Convention.
8- 9—**Detroit, Mich.** Society of Automotive Engineers production meeting at Book-Cadillac Hotel.
22-24—**Pittsburgh, Pa.** Society of Automotive Engineers' transportation meeting.
16-25—**London, England.** Olympia Motor Show.

NOVEMBER

6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
10-14—**Cleveland, O.** Motor and Equipment Association Show.
17-21—**Cleveland, O.** National Standard Parts Association Show.
30-Dec. 6—**New York.** Automobile Salon at Hotel Commodore.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

JANUARY

3-10—**New York.** National Automobile Show.
24-31—**Chicago, Ill.** National Automobile Show.

July, 1930

Another *Gain for*

Automotive Daily News

JULY, 1930, exceeded July, 1929, in advertising lineage and net revenue,

and 1929 exceeded 1928

and 1928 exceeded 1927.

In the face of lineage losses sustained by many similar business papers, it is gratifying to report another gain for the only daily in the automotive field.

Automotive Daily News

H. A. TARANTOUS, Bus. Mgr. GRAYBAR BUILDING, NEW YORK CITY

CHICAGO OFFICE
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333 No. Michigan Ave.
Chicago, Ill.

DETROIT OFFICE
Geo. M. Slocum, Mgr.
Fisher Building
Detroit, Mich.

EASTERN OFFICE
J. Edward Schipper, Mgr
Graybar Building
New York City

BOSTON OFFICE
Metz B. Hayes, Mgr.
Little Building
Boston, Mass.

PACIFIC COAST
Blanchard, Nichols & Coleman
Am. Nat. Bank Building
San Francisco, Cal.

Dealer Activities

Bloomfield, Ia., July 31.—Lowell Hill, handling the Essex, Pontiac and Plymouth lines, has leased a lot adjoining the Wishard Hotel and will utilize it as an open air sales pavilion.

Bronx, N. Y., July 31.—Within a few days, the Bronx Buick Company, Inc., 231 East 161st St., will open its seventh branch showroom in the building formerly occupied by the Buick Motor Company, 230th Street and Broadway, in which will be installed a complete service and sales unit, with a staff of seven salesmen under the management of H. B. Manuel. This new selling unit has for a number of years served Buick owners of Riverdale, Fieldston and Spuyten Duyvil sections. The Bronx Buick Company already has seven sales locations in The Bronx borough, and this addition makes the eighth sales location operated by the firm.

Beckley, W. Va., July 31.—The Brill Motor Company, now has its cars on display in the Kanawha Street showrooms, formerly occupied by the Black Diamond Motor Company. Officials of the company said that the building had been leased. Both the quarters at 197 South Kanawha St., now occupied by the Brill Motor Company, and the Black Diamond Building will be maintained by the concern, Thomas P. Doughty, manager of the Brill Company, said. The Chevrolet franchise, formerly held by the Black Diamond Motor Company has been taken over by the Lewis Chevrolet Company.

Oswego, N. Y., July 31.—Display of the new Chrysler Eights at the salesrooms of the Jordan Motor Car Company, 73-75 East 2d St., Oswego county dealer, has attracted a large number of automobile owners. This display has already resulted in several orders being placed for the new car. Wilbur Jordan, head of the Jordan Motor Car Company, is one of the pioneer automobile dealers of Oswego county.

Charleston, W. Va., July 31.—A charter was issued to the Proctor-Smith Motor Company, Inc., of Point Pleasant, Va., with $10,000 capital stock to deal in motor vehicles, radios and mechanical refrigerators. The incorporators are C. S. and Blanche S. Proctor, William F., Susan M. and Howard F. Smith, all of Point Pleasant.

Cumulative New Commercial Car Registration Statistics, June, 1930

Returns for today: Arizona, Michigan and Vermont.

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists or lists of owners in any given section, may obtain these by addressing any of these three companies.

Commercial Car Registrations do not include buses.

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Alabama			121		5				195	5	3					2				2		11				344	Alabama
Arizona	1		38		8		1		100	3	7				1		1			1		2	1			164	Arizona
Arkansas			81		1				70		9											3				164	Ark., '29
California	7		554	7	96	10	2	14	1243	94	59	22	1		59	12	10	20	7	8	1	53	4	4	107	2394	Calif.
Conn.	12	10	137	6	40	2	4	3	183	21	18	28	2	1	28			1	12	7		5	2		13	535	Conn.
Delaware		1	33		1	1			50	2	3	3			2				1							97	Del., '29
Florida		2	95		4	1			218	3	8	3	1		6							2				343	Florida
Idaho			81		5				97	2	20	1			2		2					2			3	215	Idaho
Illinois	1		442	58	45		2	4	590	28	110	9	2	1	18		1	2	1		6	8	5	2	50	1385	Illinois
Kansas		1	344	2	25	2	7		295	15	49		1		10		3		1	1	2	4		12	2	776	Kansas
Maryland	8	14	112	5	12	1	2	3	237	17	30	27			5	1			3	1	1	18	5		4	506	Maryland
Michigan	1	4	288	14	27	2	2	6	896	49	57	4	6		14	9	2	2	3		3	3	9		11	1412	Michigan
Minnesota		3	238	23	22		3	2	376	7	69	2		1	7	1	1			1	3	2	13		7	781	Minn.
Missouri	4	5	306	12	25	1	2	2	429	26	33	10	1		5	2			2	2	4	13	6	1	14	905	Missouri
Montana			45		4		2		78	4	16				1					1	1	1				153	Montana
Nebraska		9	179		9				233	10	39	3			1					1	2	5	5	2	7	505	Nebraska
Nevada			5		5				27	1	2															40	Nevada
N. Hamp.		5	84	12	9			1	138	2	1	2			9			1	2			2			1	269	N. Hamp.
New Jersey	20	44	355	26	64	4	4	19	713	50	39	50		1	35	2	2	15	8	7	4	20	3	5	38	1528	N. Jersey
N. Mexico		3	50		1		1		62	2	5				2								1			127	New Mex.
N. Carolina			203	1	8				209	5	13				2							1	3		1	446	N. Car.
N. Dakota			58		7		3		85	3	32				3					1	2		1	1		196	N. Dakota
Ohio	26	9	346	2	59	1	10	12	780	67	92	16		6	40		2		18	4	17	40	12	2	63	1624	Ohio
Oklahoma		4	268		17		5	5	331	8	81	10		1	5		1			2	2	6	7		2	755	Okla.
Oregon	2		93		7	1		9	180	13	15	2			4	1	1				1	7	1	1	12	350	Oregon
Penn'vania	34	45	556	22	123	9	11	32	1119	78	149	85	2	20	67	5	3	25	58	34	22	32	26	5	51	2613	Penna.
Rh. Island	6	4	39		5	1	5		74	13	9				8			3		3		1	1			172	Rho. Isl.
S. Carolina			90		2				163	1	4	2			1										6	269	S. Car.
S. Dakota			57	1	4		1	2	60		45				8		1		1	2		1	8		4	195	S. Dakota
Utah			72		10				136	5	9	2	1		2		3					1			4	245	Utah
Vermont		8	49	1	7		2		83	3	9	3			6					1		3	2			177	Vermont
Wash'ton			72		8		3		197	8	19				5			1				7			12	332	Wash.
W. Virginia		3	112	2	14				189	20	39		1	2	5		2		1		2	5	3		2	402	West Va.
Wisconsin		6	405	10	31		4	5	462	23	82	5		1	19		1	3	5	1	3	6	8		14	1094	Wisconsin
Dist. of Col.	5	1	23	3	9				91	7	1	3		1	1			3				1			4	153	D. C.
Totals	127	181	6031	207	719	36	76	119	10389	595	1176	292	18	35	381	35	36	76	123	80	76	263	128	35	432	21666	**Totals**
Ala., 1929		2	174		7		4		221	8	32	5			3				1		2	1				460	Ala., 1929
Ariz., 1929			89		25		1		121	17	7				5		6			5	1	1		1		279	Ariz., '29
Ark., '29		1	132		8				140	4	27	3									4	4			1	324	Ark., '29
Cal., 1929	25		437		176		7	22	1198	99	56	41			92	3	17	23	7	14	2	37		1	142	2399	Cal., 1929
Conn., '29	12	11	220	13	72		9	6	281	42	41	38		2	61			6	17	6	8	4		2	19	870	Conn., '29
Del., '29	3		46		3		1	1	80	9	6				3		1	1	1	1						156	Del., '29
Fla., 1929		5	117	1	15		1		285	10	17	9			4	2					2	10				478	Fla., '1929
Idaho, '29			135		19		1		134	9	23	4			9		1			3	2	5		1	1	347	Idaho, '29
Illinois, '29	5	10	445	66	92		11	3	783	32	115	36		1	34			4	1		18	17			66	1739	Ill., 1929
Kansas, '29		2	198	2	35		1	2	227	16	53	2		1	8	1	1		1	7	4	3		1	1	566	Kan., 1929
Md., 1929	8	10	155	7	48		3	5	267	9	52	21		1	23	2	1	6	1		1	15			18	653	Md., 1929
Mich., 1929	9	1	728	9	95		11	23	1318	92	136	19		3	86	2	3		1	7	24	8		3	37	2615	Mich., '29
Minn., 1929			315	2	23		1	4	456	21	96	5		1	16		1			5	10	8		2	5	976	Minn., '29
Mo., 1929	4	5	402	13	72		7	2	586	73	88	9		1	21	1			3	3	12	8			15	1325	Mo., 1929
Mont., '29			68		16		4	5	157	6	30	7			5	1	1				3	11		2	2	318	Mont., '29
Neb., 1929		1	191	1	21			1	210	16	54	2			3		1			2	6	6			5	520	Neb., 1929
Nev., 1929			10		12				19						1	1									2	45	Nev., 1929
N. H., 1929	1	5	90	2	27		4	3	163	7	6	3			14		2	1	2	1	2	2			2	337	N. H., '29
N. J., 1929	33	34	500	10	130		27	15	871	72	57	73		5	85	6	5	15	8	10	13	33		3	95	2100	N. J., 1929
N. M., 1929			96		11		4		89	6	4				3					2		4				219	N. M., '29
N. Car., '29	2		303		31		2	1	362	15	16	1			4	1	2		1		3	3			8	755	N. C., '29
N. D., '29			101	3	8		1		117	12	68			1	4		1				2			1	1	320	N. D., 29
Ohio, 1929	27	29	614	15	114		15	11	1044	89	151	18		4	80	3	3	2	4	5	57	58		6	58	2407	Ohio, '29
Okla., 1929		5	413		57		5	10	460	19	83	2			16				1	5	25	8			5	1119	Okla., '29
Ore., 1929	1		126		22		3	5	169	18	17	5			18		6			1	1	9			18	419	Ore., 1929
Penna., '29	36	44	759	31	238		39	20	1422	95	170	108		13	135	10	7	32	45	12	32	52		5	75	3380	Pa., 1929
R. I., 1929	5	2	75	3	27		5	5	88	23	6	17			25		2	2	3	2		5		1	7	303	R. I., 1929
S. C., 1929			173		13		3	4	171	6	11	8			2						2	1			3	397	S. C., '29
S. D., 1929			116		9		2		98	1	68	1			10				1		1	3				310	S. D., 1929
Utah, 1929			118		29		2		248	3	22	10			12		2			3	3	7		1	3	463	Utah, '29
Vt., 1929		4	61		20		5	2	87	4	23	4		2	16		2		2		6	3			3	249	Vt., 1929
Wash., 1929			174		47		2	4	310	17	32	5		2	21	2	4			4	6	18			25	673	Wash., '29
W. Va., '29		5	169	3	42			6	219	21	33	4		2	13		1		1	1	5			2	2	529	W. Va., '29
Wis., '29		3	509	28	76		6	6	773	46	113	4		8	41		1	11	7	5	15	7		2	16	1677	Wis., '29
Dist. of Col.	3	4	49	3	12				187	5	10	14		3	5		1	6	3		1	7			5	318	D. C., '29
Totals, '29	174	183	8308	212	1657	*	187	166	13361	922	1733	478	*	50	878	35	72	109	111	104	273	358	*	34	640	30045	Totals, '29

*Not in production at that time.

Service Specials Help Chevrolet Dealer Take Up Slack

KEEPS SHOP BUSY, MAKES CONTACTS

Erwin Motor Co., Philadelphia, Avoids Slump In Dull Periods

By K. H. LANSING

ANNOUNCEMENT of limited-time service specials either through the medium of postcards or display space in newspapers is being used successfully by the R. A. Erwin Motor Company, Bustleton Avenue and Welsh Road, Bustleton, Philadelphia, to stimulate business in the shop during the so-called dull summer period.

The company is a Chevrolet dealer, and while Bustleton itself has a population of only 1,200, operations are carried on over a fifteen-mile radius, much of the business coming from the metropolitan area of Philedalphia.

Such a special may be a free lubrication offer, or an "appearance" special at an attractive price. In the first case the contact is productive of paid labor through suggestions from the service department and in the second a considerable proportion of the customers thus attracted order additional work, bringing their bill up to a satisfactory amount beyond the figure stated in the offer.

* * *

AN "Auto Beautifying Special for July" was announced by the company at the low price of $33, the operations covering: (a) Waxing and striping the body; (b) waterproofing the roof; (c) ducoing the chassis and fenders; (d) applying electric burnish, and (e) vacuum cleaning the interior, thus practically renewing the appearance of the car.

It was stated in the advertisement, which carried a small, appropriate cut and occupied space two columns wide by two and one-half inches deep, that for cars of the larger size there would be a small additional cost. Prospects were invited to inspect at the showrooms samples of the company's refinished automobiles and were reminded that the company keeps open in the evening.

The advertisement was slated to be run for three weeks of the month, with an occasional interval and change-over from one paper to another, but following its first insertion the shop almost immediately had more of the work than it could handle and a long waiting list.

EVEN car owners from far out in the state took advantage of the offer. A proportion of two out of five customers for the special, on suggestion from the service manager, Rowland Townsend, who was with Mr. Erwin in the independent repair shop business long before he became a Chevrolet dealer, and who has been associated with him ever since, ordered additional work done on his car, some running their bills up to $75, or thereabouts.

"We found this special a very good medium for contact with new customers," said Mr. Erwin, "and as they have expressed themselves as much pleased with the work, we shall very likely retain them on our list."

When it is realized that of the twenty-one employees of the company, seventeen are in the service department, and yet a waiting list had to be established for customers of the "appearance" special for July, the success of this response becomes apparent.

JUNE, however, was the biggest mechanical repair month of the year for the company thus far. A "Summer Special," consisting of free lubrication, good through the month and up to July 15, with the proviso that the customer present at the service department the post card upon which the announcement was made, resulted in profitable contacts, notwithstanding the "gratis" lubricating operations, range for each car:

Front spring shackles, tie rod ends, steering knuckles and brake operating levers; steering connecting rods, rear spring shackles, rear spring saddles, rear axle shaft bearwhich covered the following wide ings, water pump grease cup, steering gear case, generator, starting motor, distributor, hood hooks, clutch and brake pedal shafts, brake cross shaft and clevis pins; door hinges, door locks and check links and front wheels, besides checking the differential and transmission and adding water to the battery. In case grease was needed for the transmission and differential, a charge was made.

THIS announcement read in part: "It is our desire to have our customers become better acquainted with our modern lubrication equipment and the efficient methods we use to thoroughly lubricate your car. We invite you to watch our mechanics work."

Mr. Erwin said, regarding this last point:

"We believe that dealers who bar customers from the shop—and there are many such—are making a serious mistake. We encourage customers to come into our shop and watch the mechanics work, so that they may realize the thorough kind of service we give them. When the customer is present, he is apt to become more appreciative of the time it takes to perform certain jobs properly and it helps to eliminate any future impatience over necessary delays, or what seem like delays to him when he is anxious for delivery of his automobile from the shop.

"One of the things with which a shop has to contend is the average customer's lack of appreciation that it takes time to turn out a proper job. Besides, this extra contact may be the means of obtaining additional service work, or sales. We make a point of giving the customer proper moment before the car is rolled into the shop, showing that meticulous care is being taken of the customer's property. Just before the car is delivered to the customer after completion of the job, an attendant with a bit of clean waste carefully wipes off the steering wheel.

the full amount of service for which he pays and we like to have him see with his own eyes that we do."

Ten per cent. of those who received the postcard had lubrication done free and to 50 per cent of these the company sold oil.

MR. ERWIN caters to the customer's pride in the proprie orship of his car and likes to have the shop demonstrate this. For example, the customer never fails to be favorably impressed by the following bit of system, the practice of which has won for the company the steady patronage of new customers, some of them owners of cars other than Chevrolet:

When the customer brings in his car for a major job, a form-fitting cover is placed over its front in the customer's presence and the tester, clad in a neat white coat, stands by with a special cover for the seat cushions on his arm. This cover he spreads over the cushions at the

After a major job has been performed, a return postcard is mailed to the customer, the remailing half consisting of the following brief questionnaire to be filled out:

1.—Was repair work satisfactory?
.....
2.—Was car ready at the time promised? .....
3.—Were you treated courteously?
.....

Spaces below this are for remarks by the customer, his signature and address.

The message side of the card not to be remailed, which has a red background and heavy black lettering, reads:

Our Success Is Built on Customer Satisfaction.

New business comes to our shop every day because some satisfied customer has told his friends and neighbors about us.

Will you please fill in the attached card so we may know if the work performed on your car was satisfactory?

All return postcards come to Mr. Erwin personally and when the customer next calls, the service manager may bring the customer into his office, so that this job and a possible future one may be discussed.

The house keeps on hand four six-cylinder Chevrolets to loan to customers who may need a car while theirs is being worked on in the shop. Salesmen and physicians often take advantage of this offer. As these service cars are not as smoothly running as a customer's new model Chevrolet, when he gets back his own car he is apt to appreciate it all the more.

An effort is made to have the customer bring his car to the shop at least after every 1,000-mile run, and for this purpose, each person who has bought either a new or a used Chevrolet from the company is given a "special inspection and adjustment service" card. This is in the form of a blue folder of convenient size for carrying in the pocket, and it explains the benefits of co-operation with the service department in having the car properly looked after at frequent intervals; offers a few cautioning suggestions about operation and announces that whereas all necessary adjustments at 500 miles are made on a new car without charge, except for oil used, reasonable charges are made for the following list of operations under the special inspection and adjustment service plan for every 1,000 miles:

Test battery, add water; check and adjust service brakes; tighten motor bolts; drain and refill crankcase; inflate tires to standard; fill transmission oil to level; fill differential oil to level; grease car thoroughly; clean spark plugs; clean ignition points and adjust; tighten spring bolts and nuts; tighten body bolts and eliminate bad rattles; grease and adjust front wheels; clean carburetor and screens; clean gasoline filter and tighten shackles.

The company goes after used cars, as well as new car service. While it does not do general repair work on all makes of cars, does considerable brake, valve and other work on cars other than of Chevrolet production. Painting, upholstering, simonizing, polishing, lubricating and washing are among the shop's activities. The service department is open at night, but while at that time it takes in jobs of many kinds, it actually performs only emergency work then, or work of minor character. Considerable profit to the shop comes from wreck jobs.

A Chevrolet flat rate card is on the wall in plain sight for the customers' inspection and the shop operates under the "split time" system, the basic charge for which is $2 an hour, the mechanics receiving one-third of the amount. According to Mr. Erwin, this plan makes for faster and more efficient work, the volume of the service department having been increased materially since its installation. In the past six months, 1,529 jobs of all sorts have been performed in the shop. The company's service volume for 1929 was double that of the previous year for every new car sold.

"We boost our service department all the time," says Mr. Erwin, "and place much emphasis on its importance in our business. Lots of new car sales come through the back door, and that has been increasingly so of late. We keep our used cars opposite the service line and through customers inspecting them while waiting for the completion of service jobs, we get considerable used car business."

The Erwin business started in an old remodeled barn; now it is housed in an impressive buff brick-and-stone building containing 10,000 square feet of floor space, with displays visible from three sides to passers-by.

Auto Beautifying Special for July

DURING July, to keep our mechanics busy, we will make a special price that will renew the appearance of your car, to wit:—

Wax & Stripe Body
Water-proof the Roof
Duco Chassis & Fenders
Electric Burnish
Vacuum Clean Interior

all for $33

Larger cars small additional cost. Samples of our refinished automobiles can be inspected at our showrooms.

R. A. ERWIN MOTOR CO. Bustleton Ave. & Welsh Road

Open Eves.—Bustleton 8350-8351

A "Beauty Special" That Brought Good Results

CLARK

Axle Engineering

—a specialized field —where supremacy results only from long experience.—Qualified experts design and produce

CLARK METAL WHEELS

CLARK EQUIPMENT COMPANY
Buchanan Michigan

AXLES
Front & Rear
WHEELS
Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS

ALL-NIGHT SERVICE BUILDS UP BUSINESS FOR ATLANTA FIRM

Atlanta, Ga., July 31 (UTPS).—All-night service, recently installed by Ernest G. Beaudry of Atlanta, Ga., Ford dealer, has resulted not only in increased business from individual owners, but from fleet owners as well.

Located on Marietta Street, far from Atlanta's "automobile row," Mr. Beaudry has specialized in selling and servicing commercial fleets of Ford cars, but is also one of the largest sellers to the individual trade. He has capitalized on his location to skim the cream of the commercial car trade.

And one of the most effective skimmers he has devised has been all-night service to commercial car users.

How does it work?

In his Marietta Street shops Mr. Beaudry is equipped to handle every kind of a job needed for a Ford delivery car or truck.

Two types of work are done, general inspection and overhauling and repair work to damaged machines. In either case, the car or truck can be brought to the shop at any time of night, and the work, if not too complicated, will be done and the truck ready for use in the morning.

This reaches two types of commercial car users, those who must start work with their fleet early in the morning and those who keep their cars in use until late at night.

The former class, by leaving cars at the Beaudry plant at the close of the day's work, will find them ready to go early in the morning. There is no delay waiting for someone to come down with the key at 7.30.

The latter group, whose cars are off duty too late to go to a regular shop, can bring them to Beaudry's at any hour and be assured of having them next day.

What does this do for the commercial car owner?

In the first place, it keeps his fleet in constant repair through a system of checking and inspection at regular intervals.

In the second place, it reduces lost time to a minimum, for only in the case of an actual breakdown or wreck is a car put out of commission during its working hours. Even then, repair work at night saves from six to eight hours on the time lost.

And, last but not least, it enables the owner of a fleet to operate with fewer cars or trucks, since he does not have to allow so much time or so many cars for emergency operation.

This factor alone has resulted in making all-night service a profitable proposition with Beaudry.

On the whole, Mr. Beaudry regards the introduction of all-night service as one of the best things he has ever tried to build up the commercial repair work and sales of his company.

And he is so thoroughly sold on it that it has become a permanent part of the firm's service.

TO ERECT TRAVEL BLDG. FOR CHICAGO WORLD FAIR

Chicago, July 31.—With breaking of ground for the Travel and Transportation Building it is now assured that this edifice will be an important unit in the 1933 Chicago World's Fair, revealing 100 years of progress in the methods of transportation and travel. The structure is to be erected between the outer drive and the Illinois Central tracks from 31st and 35th Streets. It will be windowless, metal covered and featured by a great dome suspended on sky hooks. A grandstand seating about 10,000 will adjoin the building facing the lake.

The World's Fair management has named Lafayette Markle to represent the automobile industry on the transportation committee.

A sound investment—Wisconsin Axles with an uninterrupted record of dividends in low upkeep, freedom from trouble, bigger profits.

WISCONSIN AXLES

WISCONSIN AXLE CO.
Oshkosh Wisconsin

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

M.. Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	3650	Own	6	3¾x5	33.0	Pw	Str	Vac	DR	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6D
Am. La France W	3-4	3950	Own 2 R	4	4¼x6	28.9	CS	Zen	Vac	AB	Own	C	4	Own	2R	47.4	4	R	160	7200	S36x5	S36x5D
Am. La Fran. Chieftain	3-4	5500	Own	6	4⅛x5⅛	40.8	Pw	Zen	Vac	DR	Own	C	4	Tim	Wo	28.8	4	D	175	7200	S36x8	36x8D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	54.4	4	R	165	9800	S36x5	S40x6D
Am. La Fran. Big Chief	6	6725	Own	6	4½x6	48.6	Pw	Zen	Vac	DR	Own	C	4	Own	2R	32.8	4W	D	226	10600	S40x8	S40x8D
Am. La France Z	6½	5750	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	63.5	4	R	165	10000	S36x7	S40x7D
Am. La France U	7½	6000	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	—	63.5	4	R	165	10500	S36x7	S40x8D
Austin	—	*499	Own	4	2.2 x3	7.8	—	Til	—	Aut-L	W-G	U	3	Sal	Sp	—	1	4	75	—	3.75x18	3.75x18
Autocar A	1½-2	2700	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SA	Sp	27.9	4	R	150	5060	32x6	32x6
Autocar D	2-2½	3000	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SD	2R	33.7	4	R	150	5300	32x6	32x6D
*Autocar SH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Gra	RB	Own T	U	4	Own H	2R	44.3	R	R	114	6770	34x7	34x7D
Autocar SCH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	4	Own H	2R	44.3	R	D	157	6860	34x7	34x7D
*Autocar H	3	4100	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own H	2R	48.6	R	R	114	6770	34x7	34x7D
*Autocar HS	3½	4600	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
*Autocar SHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Gra	RB	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
Autocar SCHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	4	Own C	2R	53.6	R	D	157	8180	40x8	40x8D
Autocar TEA	3-3½	5350	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	12	Own TE	2R	101.7	4	D	192	8900	36x8	36x8D
Autocar TFA	3½-5	6100	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Own T	U	12	Own TF	2R	101.3	4	*D	192	9300	38x9	38x9D
Autocar C	3½-5	5500	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Own B	C	4	Own C	2R	61.7	R	D	172	9500	42x9	42x9D
Autocar F	7½	6800	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Br-L 70	C	7	Tim	Wo	94.0	4	D	173	11000	36x7S	40x8DS
Autocar G	10	9000	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Br-L 70	C	7	Tim	Wo	97.7	WB	D	171	13000	36x8	36x8D
Brockway 65	1	1195	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	3	Col	Sp	21.3	4	Tr	137	3400	30x5	30x5
Brockway 75	1¼	1290	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	137	3450	32x6	32x6
Brockway 90	1½	1525	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	149	3650	32x6	32x6
Brockway 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Brockway 140	2	2495	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	156	5500	32x6	32x6D
Brockway 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Brockway 195	3	3820	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Brockway 190	3	4185	Con	6	4¼x4¾	40.8	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Brockway 220	3½	4560	Con	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Brockway 250	5	5950	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HV	D	182	10000	40x8	40x8D
Brockway 290	7½	7250	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7	40x14S
Brockway 640	10	9700	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	R	212	14000	38x7	36x10S
Chevrolet	½	365	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	3	Own	Sp	13.61	4	R	107	1835	4.75x19	4.75x19
Chevrolet	1½	520	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	4	Own	Sp	33.46	4	R	131	2375	30x5	30x5
Commerce Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Col 54028	Sp	25.5	4	D	142	3900	30x5P	30x5P
Commerce Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 54000	Sp	29.2	4	D	162	4300	30x5P	30x5DP
Commerce Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	4700	34x5P	34x5D
Commerce Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 54000	Sp	29.2	4		162	4500	32x6P	32x6D
Commerce Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	4900	36x6	36x6D
Commerce Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	5100	36x6P	36x6D
Commerce Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4		175	7000	36x6P	36x6D
Commerce Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4		175	7100	36x6P	36x6D
Commerce Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B		175	8200	36x6S	36x12S
Commerce Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B		175	8400	36x6S	36x12S
Commerce Series 100	5	5830	Bud B A 6	6	4¼x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 68700DP	Wo	95.0	B		175	9600	36x6S	40x14S
Day Elder M F	1¼	1345	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L	U	4	Tim 52000 H	Sp	24.2	4	D	135	3500	30x5	30x5
Day Elder G F	1½	2050	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L	U	4	Tim 54000 H	Sp	28.3	4	D	156	4400	30x5	30x5D
Day Elder H F	2	2500	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4900	S34x4	S34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4½	38.4	Pb	Zen	Vac	DR	Br-L 51	U	4	Tim 65001 H	Wo	41.5	4	D	156	7000	34x7	34x7D
Day Elder K F	4-5	5000	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	DR	Br-L 60	C	4	Tim 66702 DH	Wo	55.2	4	D	162	9200	S36x5	S36x12
Day Elder N 6 W	7	6000	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	DR	Br-L 60	C	7	Tim SW 200 H	Wo	73.6	6	D	204	10000	34x7	34x7D
Diamond T 200	1	785	Bud	4	3¾x4½	22.5	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	128½	3050	30x5	30x5
Diamond T 215	1	885	Bud	6	3⅜x4	27.3	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	135⅛	3150	30x5	30x5
Diamond T 290	1½	1475	Her WXA 2	6	3½x4½	29.4	Pb	Zen	Vac	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5D
Diamond T 303	2	1745	Her WXB	6	3¾x4½	33.7	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	160¾	4850	32x6	32x6D
Diamond T 551	2½	2250	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	168	5600	32x6	32x6D
Diamond T 503	2½	2660	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	174	6200	34x7	34x7D
Diamond T 506	2½	2820	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	2R	—	4	D	172½	6300	34x7	34x7D
Diamond T 602	3	3440	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	4	D	169½	7500	36x8	36x8D
Diamond T 606	3	3500	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	2R	—	4	D	186	7500	36x8	36x8D
Diamond T 700	3½	3740	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	R	D	162	8100	S36x5	S36x10
Diamond T 801	4	4140	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	C	7	Own	Wo	—	6WH	D	189½	8300	36x8	4 wh 36x8
Diamond T 1000	5	4420	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	4	Tim	Wo	—	R	D	170½	9700	S36x6	S40x12
Diamond T 1200	6	5600	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	180	11000	34x7	4 w h 34x7D
Diamond T 1600	8	6220	Her YXC 3	6	4⅝x4¾	51.3	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	190	11700	36x8	4 wh 36x8D
Diamond-T 1601	8	7500	Wak 6 R B	6	5 x5¾	60.0	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	12500	36x8	4wh 36x8D
Diamond T 2500	10-12	8000	Wak 6 RB	6	5 x5¾	60	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	13100	S36x7	4 wh 36x12S
Dodge Bros. U-1	½	545	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	14.28	4	D	109	1900	5.00x20B	5.00x20B
Dodge Bros. U-1	¾	695	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	21.68	4	D	124	2260	5.50x20B	5.50x20B
Dodge Bros. DA1	¾	795	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	3	Own	Sp	19.21	4	D	124	2360	5.50x20B	5.50x20B
Dodge Bros. U-1	1	795	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	4	Own	Sp	36.13	4	D	133	2590	6.00x20B	32x6
Dodge Bros. DA1	1	895	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	33.45	4	D	133	2690	6.00x20B	32x6
Dodge Bros. DA1	1	1095	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	140	2955	30x5	30x5
Dodge Bros. DA1	1½	1365	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3695	32x6	32x6
Dodge Bros. DA1	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	3810	32x6	32x6
Dodge Bros. DB1	2	1595	Own	6	3⅝x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3930	32x6	34x7
Dodge Bros. DB1	2	1645	Own	6	3⅝x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	4070	32x6	34x7
Dodge Bros. DB1	3	1845	Own	6	3⅝x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	135	4235	32x6	32x6D
Dodge Bros. DB1	3	1895	Own	6	3⅝x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	41.43	4	D	165	4520	32x6	32x6D
Dodge Bros. DB1	3	1945	Own	6	3⅝x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	185	4715	32x6	32x6D
Durant	¾	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Essex Commercial	¾	445	Own	6	2¾x4½	18.2	CS	Mar	Vac	Aut	Own	U	3	Own	Sp	17.8	4	4	110	2150	30x5	31x5.50
Fargo Packet	½	545*	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	3	Own	Sp	14.29	4	Tr	—	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	DR	Own	U	3	Own	Sp	15.53	4	Tr	—	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	4	Own	Sp	37.19	4	Tr	—	2785	6.00x20	32x6
Federal E6	1½	1090	Con 17 E	6	3⅜x4	27.3	Pb	Zen	Vac	DR	W-G T9	U	4	Cla B370	Sp	34.6	4	Tr	132	3260	6.00x20	32x6
Federal D	1-1½	830	Con W 10	4	3⅞x4¼	24.0	Pb	Zen	P	DR	W-G T9	U	4	Cla B372	Sp	40.8	4	Tr	131	3185	6.00x20	32x6
Federal F7	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	DR	Own	U	4	Tim 52005H	Sp	24.3	4	Tr	132	3765	30x5	30x5D
Federal A6	2	1855	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Cla B610	Sp	38.5	4	Tr	151	4580	32x6	32x6D
Federal A6T	2½	2185	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 58000H	Sp	41.3	4	Tr	151	4950	32x6	32x6D
Federal A 6 T W	2½	2360	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 65001 H	Wo	42.0	4	Tr	151	4950	32x6	32x6D
Federal T10R	2½-3	2740	Con 16 R	6	4 x4¼	38.4	Pb	Zen	P	DR	Own	C	4	Tim 58000H	Sp	36.3	4	Tr	165	6550	34x7	34x7D
Federal T10W	2½-3	2915	Con 16 R	6	4 x4¼	38.4	Pb	Zen	P	DR	Own	C	4	Tim 65001H	Wo	44.0	4	Tr	165	6550	34x7	34x7D
Federal U6	3-3½	3860	Con 18 R	6	4 x4½	38.4	Pb	Str	P	DR	Br-L 55	C	7	Tim 65706HP	Wo	64.6	4	D	165	7220	34x7	34x7D
Federal 4C6A	4-5	4735	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704HP	Wo	73.6	4	D	192	8330	36x8	36x8D
Federal 4C6AB	4-5	4960	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704TWP	Wo	73.6	4	D	192	8850	36x8	36x8D
*Federal U 6 S W	6	6000	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 200	Wo	71.3	6	Tr	201	9850	34x7	34x7D
*Federal U 6 S W A B	6	6500	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 200	Wo	71.3	4	Tr	201	9900	34x7	34x7D
Federal X8	7½	5085	Con B 7	4	5 x6	40	Pw	Zen	Vac	AB	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	9750	36x6S	40x14S
Federal X8R	7½	5810	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	10000	40x8	40x8D
*Federal 4 C 6 S W	8	7500	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 300	Wo	80.8	4	Tr	231	11500	36x8	36x8D
Ford AA	1½	520	Own	4	3⅞x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	131½	2792	6.00x20	32x6
Ford AA	1½	545	Own	4	3⅞x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	157	2570	6.00x30	6.00x30D
F. W. D.—H	1½	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	33.1	4	R	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—HH 6	2½	4000	Wak	6	3¾x4½	33.7	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	101.0	4	R	133	5700	36x8	36x8
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6S	36x6S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6S	36x6S
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7S	40x5SD
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6S	36x6S

1930 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
F. W. D.—C U 6	3½	5120	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6S	36x8S
*F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	*	4	170	9500	36x8	36x8
Garford Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	30x5	30x5
Garford Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	30x5	D30x5
Garford Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	34x5	D34x5
Garford Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6	D32x6
Garford Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	36x6	D36x6
Garford Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6	D36x6
Garford Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6	D36x6
Garford Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6	D36x7
Garford Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8200	S36x6	S36x12
Garford Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8400	S36x6	S36x14
Garford Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	4	D	175	9600	S36x6	S40x14
Gen. Mot. T11-1001	*3800	625	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Pontiac	Sp	14.7	4	4	109⅝	1980	5.00x19B	5.50x19B
Gen. Mot. T15-1501	*5400	695	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51500	Sp	16.14	4	4	130	2625	5.50x20B	5.50x20B
Gen. Mot. T17-1701	*5500	735	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2650	6.50x20B	6.50x20B
Gen. Mot. T19-2201	*6300	895	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2850	5.50x20B	32x6
Gen. Mot. T17-1707	*6500	750	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2670	5.50x20B	32x6
Gen. Mot. T25-2501	*6800	1235	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3375	6.00x20B	7.50x20B
Gen. Mot. T19-2214	*8500	985	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2925	30x5	30x5D
Gen. Mot. T25-2509	*8500	1280	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3425	30x5	30x5D
Gen. Mot. T30-3206	*9000	1555	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4450	6.00x20B	8.25x20B
Gen. Mot. T42-4206	*10600	1735	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4575	7.00x20B	9.00x20B
Gen. Mot. T30-3203	*11000	1605	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4525	32x6	32x6D
Gen. Mot. T44-4401	*12000	1965	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	4825	32x6	32x6D
Gen. Mot. T42-4203	*14000	1960	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4905	36x6	36x6D
Gen. Mot. T44-4404	*15000	2095	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	5095	34x7	34x7D
Gen. Mot. T60-6202	*16500	3035	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	34x7	34x7D
Gen. Mot. T60-6205	*18500	3125	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	9.00x20B	9.00x20DE
Gen. Mot. T82-8202	*19000	3795	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	7500	9.00x20B	9.00x20DB
Gen. Mot. T82-8207	*22000	4070	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	7850	38x7	38x9D
Gen. Mot. T90-9001	*23000	5885	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼	9400	7.50x20B	7.50x20D
Gen. Mot. T90-9004	*28000	6055	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼	9775	8.25x20B	8.25x20DB
*Gramm B	1½	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	34.3	4	Tr	140	3800	30x5	30x5D
*Gramm C	2	1795	Lyc ASA	6	3⅜x4½	31.54	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	31	4	Tr	160	4820	32x6	32x6D
*Gramm D	2½	2195	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	33	4	Tr	160	5100	32x6	32x6D
*Gramm E	3	2595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	35	4	Tr	160	5300	34x7	34x7D
*Gramm EY	3	3595	Con 20 R	6	4¼x4¾	40.80	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	30	4	D	190	6750	32x6	32x6D
*Gramm O-35	3	3595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	71.2	D	R	153	7200	36x5S	36x10S
*Gramm T-38	3	3595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	45	D	R	153	7200	36x5S	36x10S
*Gramm O-45	4	3995	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	75.8	D	R	153	7700	36x5S	36x12S
*Gramm T-48	4	3995	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	47	D	R	153	7700	36x5S	36x12S
*Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	25	4	D	210	7200	34x7	34x7D
*Gramm O-60	5	4745	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	78.4	D	R	153	8800	36x6S	36x14S
*Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	25.2	4	D	236	9600	36x8	36x8D
Indiana 64	1	1195	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Er-L	U	3	Col	Sp	21.3	4	Tr	137	3435	30x5	30x5
Indiana 74	1¼	1290	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	137	3450	32x6	32x6
Indiana 11	1¼	1425	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	24.48	R	R	129½	3500	30x5	30x5
Indiana 89	1½	1525	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	149	3650	32x6	32x6
Indiana 111	1½	1630	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	26.4	R	R	129½	3600	30x5	32x6
Indiana 111 XW	2	1850	Her	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L	U	4	Wis	2R	30.14	R	Tr	120	3740	32x6	32x6D
Indiana 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Indiana 140	2	2495	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4V	Tr	156	5500	32x6	32x6D
Indiana 115 A	2½	2740	Her	4	4¼x5	28.9	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	42.99	R	Tr	132	4970	32x6	34x7D
Indiana 615 A	2½	3070	Wis	6	3⅝x5	27.34	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	46.29	R	Tr	136	5160	32x6	32x6D
Indiana 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Indiana 127 AW	3	3775	Her	4	4¼x5	28.90	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	41.72	RV	D	158¼	7000	34x7	34x7D
Indiana 627 AW	3	4075	Wis	6	4 x5	38.40	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	41.72	RV	D	156¼	7200	34x7	34x7D
Indiana 195	3	3820	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Indiana 190	3	4185	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Indiana 220	3½	4560	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Indiana 250	5	5950	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HMV	D	182	10000	40x8	40x8D
Indiana 290	7	7250	Con	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7	40x14S
Indiana 640	10	9700	Con	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4RW	D	212	14000	38x7	36x10S
International AW-1	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 517	Sp	17.4	4	2	136	2620	5.25x20	5.25x20
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 502 R	Sp	15.1	4	2	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 1124	Sp	52.6	4	2	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3520	30x5	32x6
International AL-3	1½	1450	Lyc SLH	6	3¼x4½	25.3	Pb	Zen	Vac	DR	W-G	U	4	Eat 1518	Sp	42.9	4	2	138	4300	6.00x20	6.00x20D
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	4	Eat 2002	Sp	40.6	4	2	140	4000	32x6	32x6D
Int. Harvester A-4	2	1985	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 1712	Sp	47.8	4	2	145	5070	32x6	32x6D
Int. Harvester HS-54	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 54	2R	60.5	4	4	148	8000	36x5S	36x8S
Int. Harvester HS-54-C	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Own A M 428	Ch	63.8	4	4	148	8665	36x5S	36x10S
Int. Harvester W-1	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 58	2R	60.5	4	2	148	8300	36x5S	36x8S
Int. Harvester A-5	3	2550	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 2112	Sp	52.	4	2	156	5606	34x7	34x7D
Int. Harvester HS-74	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 74	2R	70.5	4	4	160	10760	36x5S	40x12S
Int. Harvester HS-74-C	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	79.1	4	4	160	11000	36x6S	40x12S
Int. Harvester W-2	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 78	2R	70.5	4	2	160	10125	36x6S	40x12S
Int. Harv's'r HS-104-C	5	5500	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	90.5	4	4	160	11095	36x6S	40x14S
La France-Repub. A-1	*6000	990	Lyc	6	2⅞x4¾	19.8	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	36.1	4	Tr	132	3000	5.50x20	32x6
La France-Repub. C-1	*7000	1295	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.1	4	Tr	144	3300	6.00x20	32x6
La France-Repub. D-1	*9000	1595	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	37.9	4	Tr	144	3725	30x5	30x5D
La France-Repub. F-2	*13000	2395	Lyc	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	40.1	4	D	174	5870	32x6	32x6D
La France-Repub. H-1	*15000	2985	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36.0	4	D	163	5850	34x7	34x7D
La France-Repub. L-1	*18000	3595	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	2R	48.0	4	D	180	6900	36x8	36x8D
La France-Repub. M-1	*20000	3800	Wak	6	4 x4¾	38.4	Pb	Zen	Vac	Aut	Ful	U	5	Eat	2R	62.3	R	D	171	6900	36x8	36x8D
Mack BL	1	2500	Own	6	3¼x5	25.39	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	148	——	B6.00x20	DB6.00x20
††Mack BG	1½	3000	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	138-156	——	32x6	D32x6
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	36x4S	36x8S
††Mack AB	2½-3	3500	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	36x4S	36x8S
Mack AB	2½-3	4750	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack AB	2½-3	4300	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack BC	3½-4	4250	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	36x5S	36x5DS
††Mack BC	3½-4	5250	Own	6	4 x5½	38.4	Pb	Str	Vac	NE	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	34x7	D36x8
††Mack BJ	3½-5	6150	Own	6	4½x5½	48.6	Pb	Str	Vac	NE	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x8	36x8D
††Mack AK	3½-5	5150	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4	J	3-Opt	——	36x5S	36x5DS
††Mack AK	3½-5	5250	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x5S	36x5DS
††Mack AC	3½-5	4950	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x5S	40x10S
††Mack AC	5½-7	5500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x6S	40x12S
††Mack AC	7½	6000	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x7S	40x14S
††Mack AP	7½	9500	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	R	J	191	——	36x7S	40x8DS
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7S	40x12S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7	40x12S
Paige	¾	860	Own	6	3¼x4½	25.35	Pb	DL	P	DR	W-G	U	3	Sal	Sp	17.36	4	Tr	115	2465	B5.50x19	B5.50x19
Relay Series 15	¾	1370	Con 17 E	6	3⅜x4	27.3	Pb	Str	Vac	Aut	W-G	U	4	Own	R	38.4	4	D	131	3750	30x5P	30x5P
Relay Series 15	1	1400	Con 17 E	6	3⅜x4	27.3	Pb	Str	Vac	Aut	W-G	U	4	Own	R	38.4	4	D	139	3800	30x5P	30x5P
Relay Series S 11	1	1700	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	25.7	4	D	142	4050	30x5	30x5
Relay Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	25.7	4	D	162	4500	30x5	D30x5

Major Specifications and Mechanical Details of 1930 Commercial Cars Built in the United States

Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Standard Tire Sizes Rear
Relay Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5300	34x5	D34x5
Relay Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	30.0	4	D	162	4700	32x6	D32x6
Relay Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5500	36x6	D36x6
Relay Series 50	2	3860	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	6800	36x6	D36x6
Relay Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5700	36x6	D36x6
Relay Series 50	2½	4000	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	7000	36x6	D36x7
Relay Series 60	2½	4555	Bud B A 6	6	4 x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	175	7350	36x6	D36x8
Relay Series 50	3	4130	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	7200	36x6	D40x8
Relay Series 60	3	4595	Bud B A 6	6	4 x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	175	7500	36x6	D38x7
Relay Series 80	3	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	U	8	Own	R	84.18	4	D	175	8400	36x6	S40x10
Relay Series 60	3½	4745	Bud B A 6	6	4 x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	58.5	4	D	175	7800	38x7	D40x8
Relay Series 80	3½	5330	Bud B A	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Cov	C	8	Own	R	84.18	4	D	175	8600	36x6	S40x12
Relay Series 80	4	5330	Bud B A	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Cov	C	8	Own	R	84.18	4	D	175	8800	38x7	S40x14
Relay Series 100	5	6615	Con 21 R	6	4⅜x4¾	45.9	Pb	Str	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	230	10000	9.00x24	D9.75x24
Reo D F 129	½	1095	Own	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	129	——	6.00x20	32x6
Reo 15 Junior	½	785	Con 16 E	6	3⅜x4	27.3	Pb	Sch	P	DR	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	6.00x18	6.00x18
Reo D F	1	1095	Own C B	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	135	3200	6.00x20	32x6
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	135	3525	6.50x20	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	6.50x20	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	6.50x20	32x6
Reo F H	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6D
Reo F C	2	1645	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6D
Reo F D	2	1745	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6D
Reo G A	3	3035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6D
Reo G D	3	1985	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	46.2	4	Tr	144	4570	32x6	32x6D
Reo G C S	3	2375	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	210	5320	32x6	32x6D
Rugby T	½	655	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Own	U	3	Own	Sp	15.6	4	4	——	2160	29x5	29x5
Rugby 6-15	1	865	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	2900	20x5.50	32x6
Rugby 615	1½	930	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	3000	5.50x20	30x5D
Selden 7 C	1	1098	Con	6	2⅜x4¾	19.84	Pb	Zen	Vac	Aut	Br-L	U	3	Tim	Sp	—	4	D	124	3600	30x5	30x5
Selden 17 C	1½	1500	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 317 C	1½	1610	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 37 C	2	1935	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	151	4800	32x6	32x6D
Selden 39 C	2½	2920	Con	6	4 x4⅛	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	164	5800	32x6	32x6D
Selden 47 C B	3½	3785	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	171	7200	34x7	34x7D
Selden 47 C D	4	4435	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	5	Wis	2R	—	4	D	171	7600	36x8	36x8D
Selden 67 C	5	4975	Con	6	4⅛x4¾	45.94	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	171	8700	36x8	36x8D
Selden 77	7	7365	Con	6	4⅜x5¾	54.15	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	178	12000	36x7	40x7D
Service Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	30x5	30x5
Service Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	30x5	D30x5
Service Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	34x5	D34x5
Service Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6	D32x6
Service Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	36x6	D36x6
Service Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6	D36x6
Service Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6	36x6
Service Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6	D38x7
Service Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8200	S36x6	S36x12
Service Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8400	S36x6	S36x14
Service Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	4	D	175	9600	S36x6	S40x14
Stewart 30	1	695	Lyc AFE	4	3¾x4½	22.5	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2905	6.50x20	6.50x20
Stewart 30 X	1	795	Lyc WRG	6	2⅞x4¾	19.8	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2965	6.50x20	6.50x20
Stewart 40	1½	895	Lyc AFE	4	3¾x4½	22.5	P	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	130	3215	6.50x20	6.50x20D
Stewart 34 X	1½	1195	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	145	3526	6.50x20	6.50x20
Stewart 28 X	1¾	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	Ful	U	4	Cla	Sp	44.1	4	D	136	3840	6.50x20	6.50x20
Stewart 29 XS	2	1695	Lyc ASA	6	3⅝x4½	25.3	Pb	Str	P	DR	Ful	U	4	Cla	Sp	44.1	4	D	145	4188	32x6	32x6D
Stewart 26 XW	2	2290	Lyc TF	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5095	32x6	32x6D
*Stewart 18 X	2½	2690	Lyc TF	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5788	32x6	32x6D
Stewart 32 X	2½	1990	Lyc ASA	6	3⅝x4½	31.54	Pw	Str	Vac	DR	Ful	U	4	Cla	Sp	46.1	4	D	165	5100	32x6	32x6D
Stewart 33 X	3	3290	Lyc TS	6	3¾x5	36.2	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	105.1	4	D	165	6450	34x7	34x7D
Stewart 19 X	3½	3690	Lyc TS	6	3¾x5	36.2	Pw	Str	Vac	DR	Ful	C	12	Tim	Wo	105 1	4	D	165	6990	36x5	36x10
Stewart 31 X	5	4990	Wak 6 RSL	6	4⅜x5⅛	45.9	Pw	Str	Vac	DR	Ful	C	8	Tim	Wo	82.1	4	D	165	8400	36x6S	36x6SD
Stewart 27 X	6-7	5700	Wak 6 RSL	6	4⅜x5⅛	45.99	Pw	Str	Vac	DR	Ful	U	8	Tim	Wo	93.81	4	D	165	9927	36x7	40x7D
Studebaker GN-P	¾	845	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	15.15	4	4	115	2465	6.00x19	6.00x19
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	130	2990	6.00x20	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4⅝	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	146	3000	30x5	30x5
Studebaker GN-N	*4000	1245	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Cla	U	4	Cla	Sp	33.5	4	D	146	3265	30x5	32x6
Studebaker 77	*12500	2895	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	158	5030	7.00x20	7.00x20D
Studebaker 88	*12500	3295	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5200	7.50x20	7.50x20D
Studebaker 99	*14000	3795	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5680	7.50x20	7.50x20D
Whippet 96 A	½	360	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.74	4	R	103¼	1691	4.75x19	4.75x19
White 15 B	1	1545	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
White 60	1	1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	DR	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
White 57	1¼	2725	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
White 29 A	1½	2125	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	2R	32.1	R	R	145½	4412	34x5	34x5D
White 61	1½	2450	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5D
White 56	2	3125	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4S	36x7S
White 51 A	2½	3750	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5S	36x8S
White 58	3	4400	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	49.7	4	R	180	7535	36x5S	36x5SD
White 55	3½	4650	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	66.1	D	R	174	8512	36x5S	40x5SD
White 52 T	3½	4700	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	76.5	D	R	129½	8236	36x5S	40x5SD
White 52	5	5100	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	IG	92.3	D	R	174	9184	36x6S	40x12S
White 59A	7½	6000	Own 3 A	6	4 x5¼	38.4	Pw	Zen	P	L-N	Own	U	4	Own	Sp	66.5	D	R	155⅛	——	40x8	40x14S
Willys Six 98 B	½	525	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.28	4	B	110	1903	5.00x19	5.00x19
Willys Six C-101	1½	695	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Cov	U	4	Cla	Sp	36.12	4	B	131	2675	5.50x20	30x5
Willys-Knight T-103	1½	825	Own KGT	6	2⅝x4¾	20.7	Pb	Til	Vac	Aut	Cov	U	4	Cla	Sp	42.33	4	B	131	2808	5.50x20	30x5

GENERAL NOTATIONS

***†REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight in pounds.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud Buda; Con., Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak Waukesha; Wis, Wisconsin Hall, American Car & Foundry

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all main, connecting rod and camshaft bearings, including wrist-pins; CS, circulating splash Sp, Splash

CARBURETOR Car, Carter; Mar, Marvel; Sch Wheeler-Schebler; Str, Stromberg; DL, Detroit Lubricator; Til, Tillotson; Zen Zenith-Detroit.

FUEL FEED Gra, Gravity; Vac, Vacuum tank; P, Fuel pump.

IGNITION AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; D R, Delco-Remy; Mag, Magneto

TRANSMISSION Br, L, Brown-Lipe; Cov, Covert; Ful Fuller; Mec, Mechanics Machine; Mun, Mungle; W-G, Warner Gear; Cotta, Cotta Gear Co.

LOCATION—C, Center, amid; U, in unit with engine; J, on jackshaft.

REAR AXLE—Cla Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken Wis, Wisconsin

FINAL DRIVE—IG, internal gear; St, Straight bevel; Sp, Spiral bevel; Wo, Worm; 2R, Double reduction; Ch, Chain; R, Relay drive.

BRAKES—J, Jack shaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; V, Vacuum booster; W, Westinghouse air brake. B Both front and rear wheels.

TIRES—B, Balloon; D, Dual; S, Solid; P, Pneumatic

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

Chieftain mode also available as Dump Truck, 160-inch wheel base.

Balloon tires optional on Chief, Chieftain and Big Chief models.

AUSTIN

*Price includes body.

AUTOCAR

*Engines in these models are located under the driver's seat.

DAY-ELDER

Models GF and HF also available in 186-inch wheel base.

Model JF also available in the following wheel bases: 165, 180 and 204 inches.

Model KF also available in 202-inch wheel base and tractor 149

DURANT LINE

*Price includes panel body.

F. W. D.

*Indicates six-wheel model. Special power take-off transmission, which provides 3 power take-offs which may be operated in any transmission speed, optional on all models

*Foot brake on X6 is a lockheed type operating on all six wheels.

FEDERAL

*Six wheelers.

GRAMM

*Models A, C, D and E are furnished in three wheel base lengths—others on request.

*Models GY and GYB also available in 190-inch wheel base.

*Models HY and HYB also available in 210-inch wheel base.

Tire sizes and electrical equipment optional, depending upon type of service—coach or van.

*Model O Series, Large engine, pneumatic tires, special wheel bases optional at extra cost.

*Model T Series, Large engine, pneumatic tires, special wheel bases and 8 speed transmission optional at extra cost.

GENERAL MOTORS TRUCK LINE

*Capacity indicated for each chassis is the recommended gross weight without exceeding rated capacity of tires. The tire size does not affect the straight rating for which chassis is guaranteed and each model is designed to operate satisfactorily under average conditions with loads giving a total gross weight (chassis, body, equipment and payload) equal to straight rating given below. The additional standard wheel base lengths, the number of additional tire types (tire combinations—each type carrying a recommended gross weight) and the ton range on a nominal payload basis for each model is given below

Model	Straight Rating	Additional Wh. Bases, ins.	Addit'l Tire Types	Pay'l Range
T-11	2800	None	None	½
T-15	5400	141	2	¾
T-17	6500	141	6	¾-1¼
T-19	8500	141, 152	16	1-2
T-25	8500	141, 152	11	1-1¾
T-30	11000	152, 164	12	1½-2½
T-42	14000	152, 164, 181	10	2-3½
T-44	15000	152, 164, 181	10	2-5
T-60	18500	164¾, 184½, 200¼	16	2½-4½
T-82	22000	167½, 185¼, 201	10	3-6
T-93	28000	201, 220	5	5-7½

Optional rear axle ratios are available for all models.

MACK LINE

Other wheel bases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

HYP.—Hypoid drive, single reduction.

††Made also in tractor models.

REO LINE

Model F A also available in 129-inch wheel base.

RUGBY

F—Chassis; weight includes body.

STEWART LINE

Model 30 and 30X can also be supplied in 120 and 140-inch wheel base.

Model 40 can also be supplied in 140 and 160-inch wheel base.

*Model 34X can be supplied in 145, 160 and 176-inch wheel base.

Model 28X can be supplied in 145, 160 and 176-inch wheel base.

Model 29XS can be supplied in 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 170 and 190-inch wheel base.

*Models 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

As optional equipment models 18X, 19X, 33X, 31X and 27X can be supplied with Timken dual reduction rear axle.

STUDEBAKER LINE

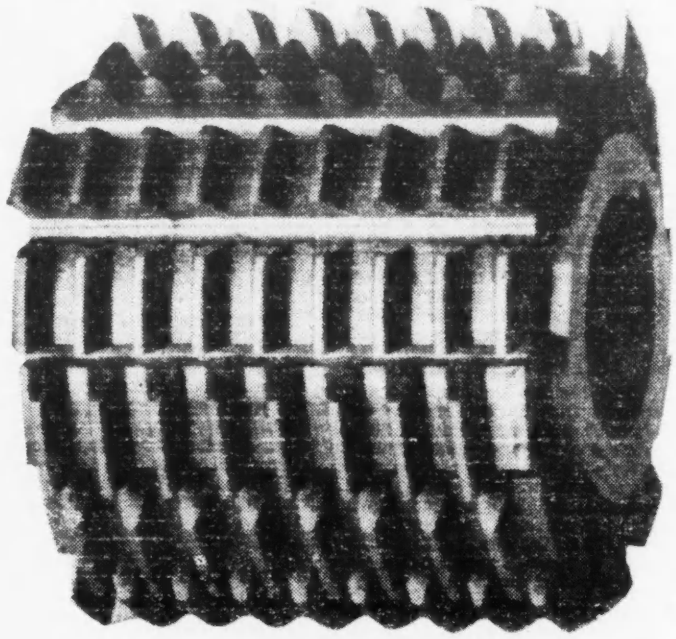
*Capacity Model GN-N is 4,000 lbs. for body, cab, driver and payload.

Maximum gross load, chassis, body and payload for Models 77 and 88 is 12,500 lbs and for Model 99 is 14,000 lbs.

†Hand brake same as foot brake, standard. Hand brake on drive shaft, special equipment.

Production - - Engineering - - Factory -

Barber-Colman Introduces New High Production Hob



BARBER-COLEMAN COMPANY of Rockford, Ill., has introduced a new high production hob. It is claimed to cut more gears, to be faster and to draw less power in doing so than the conventional type of hob. The reasons behind the new hob, as given by the makers, follow:

"Investigation showed that the tips of the hob teeth were doing by far the greater share of the work of removing the metal. It was evident that the tips of the teeth could be strengthened if they could be widened. This result was accomplished by assuming a pitch diameter for the gear to be cut that was smaller than the actual pitch diameter, and laying out the profile of the hob tooth on the basis of this assumed diameter. This made the pressure angle of the hob smaller than the pressure angle of the generated gear, gave wider tips to the hob teeth, and made them narrower at the base, without disturbing the outline of the generated gear teeth. Thus, a deliberate distortion allowed more metal at the point of greatest cutting effort without affecting the results.

"Another variation from common practice produced freer cutting action. Ordinary hobs have equal side clearances on the teeth, but this often produces a dragging effect on the leaving side. A special attachment on the backing-off machines at the Barber-Colman plant compensates for this effect by making the clearances unequal. Thus, the leading side has less clearance and the leaving side more than customary, producing a more uniform cutting action on both leading and leaving sides.

"To increase the smoothness of cutting action still further, two more unorthodox changes were made. First, straight gashes are used, producing teeth having faces at an angle with the line of the lead helix, thus giving a shearing effect on the leading edge and top of each tooth. The added clearance mentioned above improves the cutting action of the obtuse-angled leaving edge. Second, the teeth are sharpened with a considerable hook instead of the customary radial face. These distortions have the same effect in a hob as a drop-off back of the cutting edge has on any metal cutting tool—they produce a more effortless cutting action, resulting in better finish on the work.

"The two foregoing irregularities required that one more distortion be made. The outline of the hob tooth was disturbed by the hook and straight gashes so that it was necessary to make a compensating distortion in the tooth form. With this final adjustment, the hob was ready for tests.

"Comparative tests have shown encouraging results. For most ordinary work, and especially roughing work, the Barber-Colman High Production Hob should give from 10 per cent. to 50 per cent. greater production per unit of working time. For the same production, the machine on which it is used should consume from 10 per cent. to 25 per cent. less power."

IMPORTANT CHEMISTRY ROLE IN STEEL MAKING EMPHASIZED BY HERTY

Chemistry's important role in steel making is emphasized in a report by Dr. C. H. Herty, supervising metallurgist of the United States Bureau of Mines at Pittsburgh, to the iron and steel section of the National Research Council Science Advisory Committee ,which is working on plans for an iron and steel exhibit at the Chicago World's Fair in 1933.

The National Research Council Science Advisory Committee consists of about forty leaders in all fields of scientific achievement throughout the country, who under the chairmanship of Dr. Frank B. Jewett, vice-president of the American Telephone and Telegraph Company, are collaborating with the Chicago fair trustees in developing a science pattern for the exposition.

"The major role of chemistry in steel making processes," writes Dr. Herty, "has been to formulate methods for the determination of various substances in steel, and once the effect of these substances has been determined by the metallurgist, to asist in working out methods for the elimination of the harmful material.

"Up until recent years the contribution of the chemist has been on the analytical side rather than on any major developments, although some of the major developments depended on the correct knowledge of what was in the raw materials and how certain elements could be eliminated from the steel.

"Scientific investigations on steel-making processes may be divided into fairly definite periods as far as the type of work is concerned.

"From 1860 to 1877 considerable attention was given to gases in steel, this being because the Bessemer and open-hearth processes were just coming into use and a good deal of trouble was being encountered with gases.

"The second period, 1877 to 1899, saw much work being done on the removal of phosphorus from iron, most of this work being carried out in England where high-phosphorus ores prevail and the phosphorus in the finished steel was generally too high to meet specifications of the finished product. Most of this research centered on the use of lime as a dephosphorizer and on studies on the function of both lime and iron oxide in dephosphorization of steel.

"In the period 1889 to 1902 a great deal of attention was given to the elimination of sulphur from iron and steel, the two main methods of attack being the use of manganese to desulphurize pig iron and the use of lime in the open hearth to desulphurize steel.

"During the period 1902 to 1912 the effects of oxygen in steel began to be appreciated and investigated. Some time before this Ledebur had developed his method for the determination of oxygen by reduction of the steel sample with hydrogen, and during the above mentioned period a good deal of work was done on determining the oxygen content of various steels.

"The period 1912 to 1922 saw further attention paid to oxygen in steel and new methods devised for the determination of the oxides. By this time the elimination of sulphur and phosphorus was pretty well understood and investigations on these two metalloids were rather infrequent.

"From 1922 to 1930 increasing attention was paid to oxygen in steel, with particular emphasis on the various types of oxygen compounds present, the non-metallic inclusions in steel. The increased activity on this subject was very largely due to the increasingly rigid specifications of buyers, particularly in the automobile trade.

Meet the Engineers

TO acquaint its readers with the important, but unsung, members of the automotive fraternity—the engineers who design and build the nation's cars—Automotive Daily News is publishing a series of brief biographies of the engineers of companies producing automobiles, automotive equipment, parts and accessories. These biographies will cover the training and experience of leading engineers and their outstanding contributions to the progress of our industry.

Earl C. Blaine, one of the young, progressive body engineers in the industry, and for the past three and a half years chief body engineer with the Marmon Motor Car Company, of Indianapolis, has been connected with automotive engineering since 1914.

He was born in Galt, Ont., Canada, in 1896, of Scotch-English parents. He attended both grade and high schools in his native town and has a two year course in mechanical engineering at Toronto University.

In May, 1914, Mr. Blaine went to Flint, Mich., and started work in the factory of the Mason and Chevrolet Motors. At the end of two years he joined the engineering department of the Buick Motor Car Company. His next position was with the New York engineering offices of the Chevrolet Motor Car Company. Returning to the employ of Buick, he was sent by this organization to Muncie, Ind., and later, when the Sheridan Motor Car Company of that city was taken over by the Durant Motor Car Company, Mr. Blaine was made body engineer of this compny and did considerable development work for Durant Motors.

By this same company he was sent to Bridgeport, Conn., as body engineer for the Locomobile Company of America; returned to Muncie to design bodies when Locomobile entered the low-price field, and was finally transferred to Flint, Mich., to be in charge of body building and body engineering at the Durant Motors plant in that city.

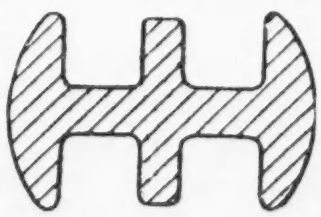
In 1926 Mr. Blaine entered the employ of the American Car and Foundry Company, Detroit, and, after serving a comparatively short time in the bus-building field, was made chief engineer of the Murray Body Corporation, Indianapalis division. He later joined forces with the Marmon Motor Car Company of the same city, and for the past three and a half years has been chief body engineer of that concern.

Mr. Blaine has been intrumental in developing the use of chicken-wire roof construction, the all-steel front end, and has just completed the development of an antenna for use in open car decking material, which is manufactured under the trade name of Aerial-Teal.

Mr. Blaine is married and has a two-year-old son. Among his hobbies are those of fishing and gardening. He is an ardent follower of all sports and is, in particular, a typical Hoosier basketball fan.

English Firm Claims Marked Improvement In New Belt Fastener

A NEW belt fastener has recently been introduced by Messrs. Smith & Davis, Ltd., Hampton Street, Birmingham, England, which it is claimed is an improvement over existing types. The "Beacon safety grip fastener," as it is called, is shown in the accompanying illustration, from which it will be noted that although it resembles the old type of belt fastener in general use some years ago, the new fastener carries a center



piece known as the fulcrum, which when the joint is made is interposed between the ends of the belt. A size of fastener is chosen which will just pass the thickness of the belt between the fulcrum and the end piece. Suitable slots are cut in the belting to facilitate insertion of the fasteners, which are then turned round at right angles to the slots in the normal manner.

It is claimed that when these fasteners are employed the short fibers between te holes and the end of the belt are relieved from strain, giving greatly increased strength and wearing life. The ends of the belt are forced together so that the strain is partly borne by the ends of the belt pressing against each other.

Some interesting tensile tests on machinery belting joints were made by the engineering department of the University of Birmingham on behalf of the makers of the new Beacon belt fasteners, the object being to obtain comparative data relating to the power it was possible to transmit by belts fitted with various types of fasteners. It is claimed that the result of the ninety-six tests carried out showed the Beacon fasteners to have 32 per cent. higher failing load than the average of all the other fasteners tested, and also to have the highest breaking strain.

In addition, actual running tests over long periods have been recently carried out. Belts carrying the various types of fasteners were run at high speeds with a continuous tension of 36 pounds per inch width of belt, each fastener being submitted to at least two tests, so that average figures could be obtained. It is stated that the Beacon fasteners were shown to have an endurance of approximately 40 per cent. more than the best results obtained by other fasteners tested. The projecting joints made by Beacon fasteners render them, of course, unsuitable for use with belts traveling through narrow clearances and in instances where both sides of the belt are used. These cases, however, should only represent a very small percentage of the total drives in existence.—The Automobile Engineer.

Spencer Turnbull Announces New Airplane Engine

Hartford, Conn., July 31.—A new type of airplane engine which achieves half speed propeller revolutions without using the added unit of reduction gears, thus reducing the load and making production costs lower, is announced by L. R. Spencer of this city. The engine has successfully passed all ground tests.

The engine has been in the course of production at the plant of the Spencer Turnbull Company at 278 Main St., for several months past. In shop tests the engine at 3,000 r. p. m. came up to expectations. The financial backers are the four Tait brothers in Springfield, Mass. The motor is of the H type. There are four cylinders with integral fins, these being cut in the cylinder block. There are two crank shafts with a centrally located propeller shaft.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

VAN NORMAN OFFERS NEW POLISHING SET

Springfield, Mass., July 31.—A new electric polisher set, No. 552, interesting because of its lightness and ability to go into close spaces, is offered by the Van Norman Machine Tool Company.

It weighs three pounds and comes complete with driver, arbor, pad, disk and lambs' wool bonnet, ready for attachment for operation. It operates from any good quarter-inch electric drill.

As a quality garage accessory, the manufacturers state, the polisher will give profitable and quality results with any good-grade cleaners and waxes made for electric polishing.—Price $28.50.

B-J AIRCRAFT CHANGES ENGINEERING PERSONNEL

Baltimore, Md., July 31.—According to recent announcement by the B-J Aircraft Corporation, two major changes in the personnel have been effected.

William H. Miller, formerly chief of research, assumes the duties of assistant chief engineer, while the appointment of George Arnold as factory manager is effective immediately. Mr. Arnold was previously connected with the Buhl Aircraft Corporation and the Curtiss Aircraft Company in various engineering and aerodynamical activities.

Farm States Car Sales Off 25% in 6 Months

DROP NEAR THAT FOR ALL COUNTRY

Kansas Registrations Top Corresponding Month in 1929

NEW YORK, July 31—Despite the low prices for agricultural products this year, new passenger automobile sales in the agricultural states of the Middle West in the first six months held to a level that compared favorably with the other sections of the country.

Complete registration returns from six states in this section, Iowa, Oklahoma, Nebraska, Kansas, North and South Dakota, show a total of 152,997 new car sales, as compared with 204,629 in the corresponding period of last year, a falling off of 25 per cent. This decline is only slightly higher than the drop in the first half year for the country as a whole. While complete figures are not yet available, it is estimated that the half-year decline will be around 23 per cent.

In one of the six states, Kansas, sales turned sharply upward in June, exceeding those in the corresponding month of last year. The total was 3,133, as against 2,813 a year ago. This increase failed to give the state a low decline for the half year, however, the total of 26,671 comparing with 33,754 a year ago, a drop of 24 per cent.

In the other five states, June registrations were sharply below the corresponding month of last year.

Following is a table showing the registrations for the first six months in each of the six states, as compared with the corresponding period of last year, with the percentage of loss indicated:

	1930	1929	% Loss
Iowa	**43,016**	**55,901**	**14**
Oklahoma	**32,824**	**47,091**	**30**
Nebraska	**25,726**	**36,024**	**28**
Kansas	**25,671**	**33,754**	**24**
South Dakota	**11,755**	**16,891**	**30**
North Dakota	**9,905**	**14,968**	**40**
Totals	152,997	204,629	25

In South Dakota, June registrations were higher than in the preceding month, while in North Dakota and Nebraska the June sales were just short of those of May, indicating that the seasonal decline in business in those states was not as great as usual.

For the first half year, sales of new cars in Iowa made the best showing of any state in the group, as compared with last year. The total in this agricultural state was 43,016, as against 55,901 in June, 1929, a decline of 14 per cent.

The next best record was that of Kansas, where people bought 25,671 new cars, as compared with purchases of 33,754 a year ago, a decline of 24 per cent., or about the same falling off as that for the nation as a whole.

Oklahoma, with 32,324 sales as against 47,091 a year ago, and South Dakota, with 11,755 as against 16,891, showed declines of 30 per cent., while North Dakota, with registrations of 9,005, as compared with 14,963 last year, sustained the largest loss, 40 per cent.

Iowa made the best record in new car sales as compared with last year by starting 1930 with a rush. In each of the first three months of the year, the registrations were higher than in the corresponding month of last year. January sales were 3,851, as compared with 3,839; February, 5,073, as compared with 4,207, and March, 9,404, as against 8,333.

In Kansas, sales in April and June were higher than in the corresponding periods of last year. April registrations were 9,214, as against 7,720, while in June they were 3,133, as compared with 2,813 a year ago.

Reflecting the tendency of North and South Dakota to move together, sales in both of these states in March were higher than a year ago, with North Dakota having the best margin of increase.

Following are the registrations in the six states for the first six months of 1930, as compared with the corresponding months of last year:

IOWA

	1930	1929
January	3,851	3,839
February	5,073	4,207
March	9,404	8,333
April	11,241	12,654
May	10,138	13,748
June	8,309	13,129
Totals	43,016	55,901

OKLAHOMA

January	3,933	6,458
February	6,267	7,323
March	5,737	8,643
April	5,732	10,162
May	6,714	8,195
June	4,541	6,305
Totals	32,324	47,091

NEBRASKA

January	4,503	6,077
February	3,986	4,705
March	3,891	5,276
April	4,990	7,881
May	4,191	6,849
June	4,065	5,236
Totals	25,726	36,024

KANSAS

January	1,936	3,034
February	2,243	6,116
March	3,472	7,188
April	9,214	7,720
May	5,673	6,883
June	3,133	2,813
Totals	25,671	33,754

SOUTH DAKOTA

January	1,961	2,343
February	1,636	1,952
March	1,878	1,876
April	2,050	2,916
May	1,862	3,114
June	2,196	4,190
Totals	11,755	16,391

NORTH DAKOTA

January	701	1,540
February	720	859
March	1,186	940
April	2,446	4,317
May	1,998	3,765
June	1,954	2,967
Totals	9,005	14,968

G. M. A. C. FINANCIAL POSITION IS STRONG

New York, July 31.—The General Motors Acceptance Corporation has issued a consolidated balance sheet showing the condition of the company as of June 30, 1930, in which it is shown the company has cash on hand amounting to $58,779,889.

The surplus amounts to $20,000,000, and undivided profits of $11,008,595 are reported. Notes and bills payable amount to $277,684,000, while the notes and bills receivable amount to $402,486,000.

Following is the statement in detail:—

ASSETS

Cash in banks and on hand		$58,779,889.30
Notes and Bills Receivable:—		
United States and Canada	$345,447,739.29	
Overseas	57,039,047.98	
	$402,486,787.27	
Accounts Receivable:—		
Affiliated corporations	$3,698.09	
Others	2,219,489.38	
	$2,223,187.47	
Furniture and equipment, less depreciation		$1,071,093.72
Investment:—		
General Exchange Insurance Corporation	$7,176,227.20	
Other	6,000.00	
	$7,182,227.20	
Deferred Charges:—		
Unamortized debt discount and expense	$1,693,237.59	
Prepaid discount	1,691,474.18	
Other	14,108.92	
	$3,403,820.69	
Total	$475,147,005.65	

LIABILITIES

Capital stock	$50,000,000.00
Surplus	20,000,000.00
Undivided profits	11,008,595.74
	$81,008,595.74
Ten-year sinking fund 6% gold debentures Due Feb. 1, 1937	$50,000,000.00
Retired through sinking fund	5,690,000.00
	$44,310,000.00
Five Per Cent. Serial Gold Notes:—	
$5,000,000 due annually March 1, 1931 to 1936	$30,000,000.00
Notes and Bills Payable:—	
Notes, United States	$216,812,000.00
Notes, Canada	12,794,000.00
Bankers acceptances discounted	27,237,850.95
Bills of exchange discounted	1,310,306.39
Advances and loans, overseas	19,530,787.64
	$277,684,944.98
Accounts Payable:—	
Affiliated corporations	$6,184,473.10
Other	2,102,974.33
	$8,287,447.43
Accrued Accounts:—	
Interest payable	$1,687,482.25
Taxes	1,578,158.94
	$3,265,641.19
Dealers' repossession loss reserves	$3,059,409.95
Unearned income	15,528,274.14
Reserves:—	
Receivables	$5,739,912.56
Contingencies	1,000,000.00
Miscellaneous	262,779.66
	$7,002,692.22
Total	$475,147,005.65

OTHER FINANCIAL NEWS

ALUMINUM INDUSTRIES

Aluminum Industries, Inc., reports for the six months ended June 30, 1930, net profit of $134,917 after charges and taxes, equivalent to $1.35 a share on 100,000 no-par shares of capital stock. This compares with $175,113 or $1.75 a share in the first half of 1929.

Net profit for the quarter ended June 30, amounted to $71,010 after above charges, equal to 71 cents a share, comparing with $63,907 or 64 cents a share in preceding quarter and $128,671, or $1.29 a share, in the June quarter of 1929.

Current assets as of June 30 last amounted to $1,277,879 against current liabilities of $591,962. This compares with $1,382,856 and $652,582, respectively, on December 31, 1929.

MOTOR BANKERS CORP.

The Motor Bankers Corporation reports for the six months ended June 30, 1930, net profit of $211,326 after charges and taxes, equivalent after dividend requirements on the 8 per cent. preferred stock, to $1.36 a share on 151,723 no-par shares of common stock. This compares with $221,916 in the first half of 1929, or $1.43 a share, based on the same number of shares.

MULLINS MANUFACTURING

The Mullins Manufacturing Corporation reports for the quarter ended June 30, 1930, net profit of $23,704 after interest, Federal taxes, etc., equivalent to 79 cents a share on 30,000 no-par shares of $7 preferred stock. This compares with net loss of $29,516 in the preceding quarter, and net profit of $177,444, or $1.24 a share, on 100,000 shares of common stock in the second quarter of 1929, after allowing for preferred dividend requirements.

Net loss for the six months ended June 30, 1930, was $5,812 after above charges, comparing with net profit of $341,700 in the first six months of 1929, equal after dividend requirements on preferred shares, to $2.36 a share on the common stock.

PARKER RUSTPROOF

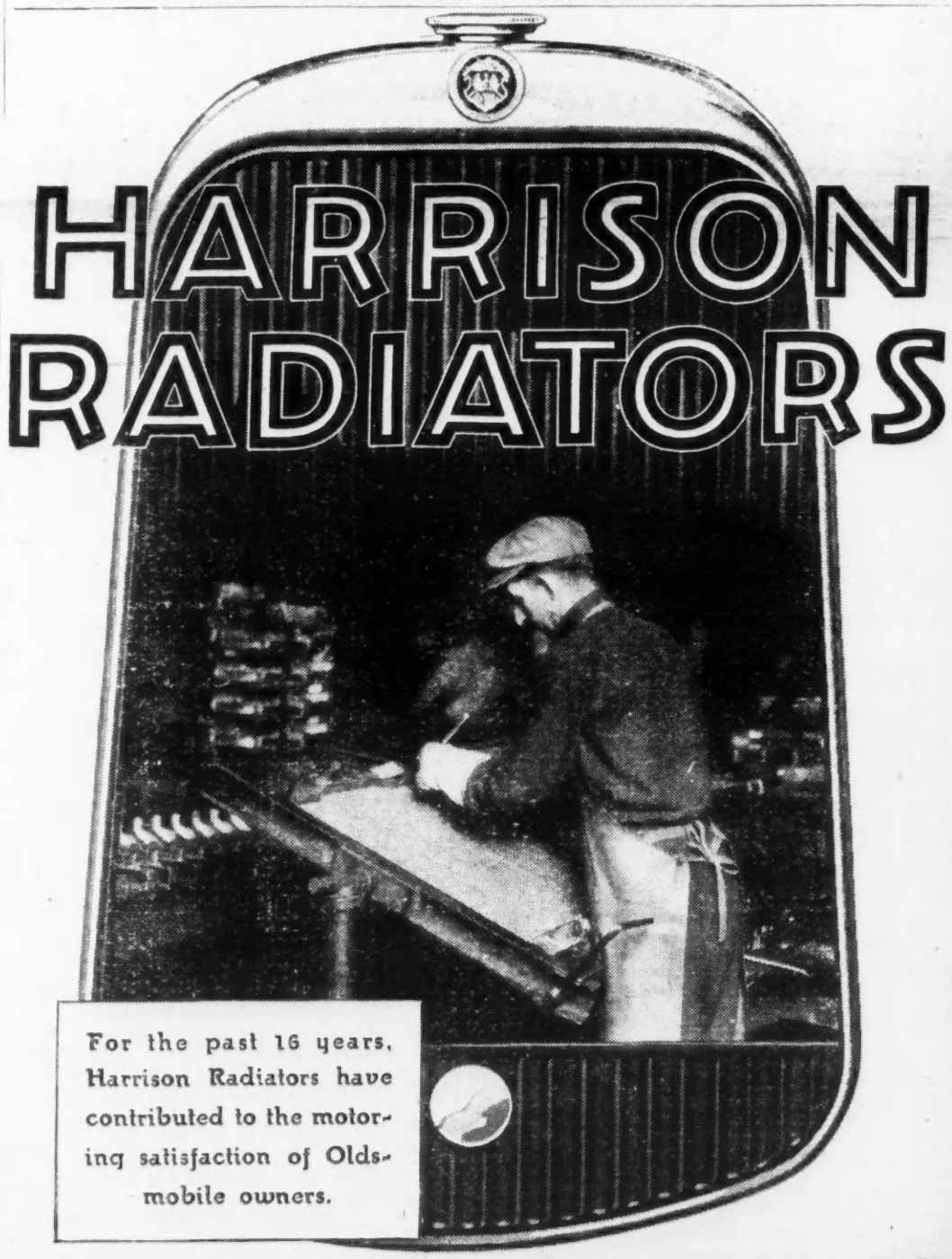
The Parker Rustproof Company has declared a stock dividend of 10 per cent. on the common and the regular quarterly dividend of 62½ cents on the common, both payable August 20 to stock of record August 11. A similar stock dividend was paid on the common on May 20 last.

AUBURN-CORD DISTRIBUTOR NAMED FOR HIGH POINT, N. C.

High Point, N. C., July 31.—Announcement has been made here of the appointment of the Gate City Motor Company as Auburn and Cord distributor for High Point and surrounding territory. The company is located at 117 South Wrenn St. and will carry a complete line of Auburn and Cord front wheel drive models.

NEW STATION FOR SOCONY

Carthage, N. Y., July 31.—Work on the new Standard Oil Company of New York service station in lower State Street is progressing rapidly. The new station, which will be completed shortly, will contain six pumps, and is built on the site of the old McCollom Block, long one of the landmarks of the north country.


HARRISON
RADIATORS
For the past 16 years, Harrison Radiators have contributed to the motoring satisfaction of Oldsmobile owners.